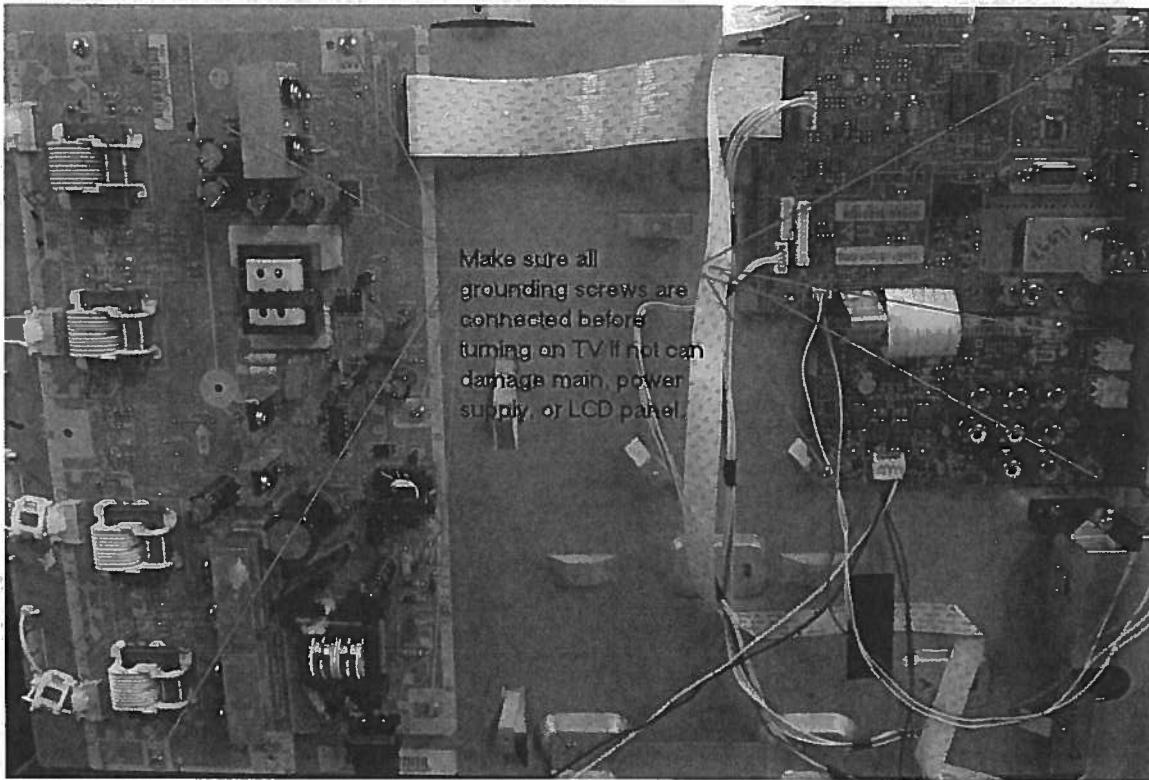


## ATTENTION ON ALL DVD/TV combo TV's

When working on a TV/DVD combo unit make sure you have all your ground screws connected when turning on TV if not can damage the main board, power supply, or LCD panel.



## WHEN REPLACING DVD DECK

### [ When removing the DVD Deck ]

Before removing Pick Up PCB and DVD MT PCB connector, the short circuit the position shown in Fig. 1 using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

### [ When installing the DVD Deck ]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

#### NOTE

- Before your operation, please read "PREPARATION OF SERVICING".
- Use the Lead Free solder.
- Manual soldering conditions
  - Soldering temperature:  $320 \pm 20^\circ\text{C}$
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to keep the Flux smoke away from it.

There are 4 solder pads. If the top & bottom pads are shorted together, this solder must be removed for the DVD to operate.

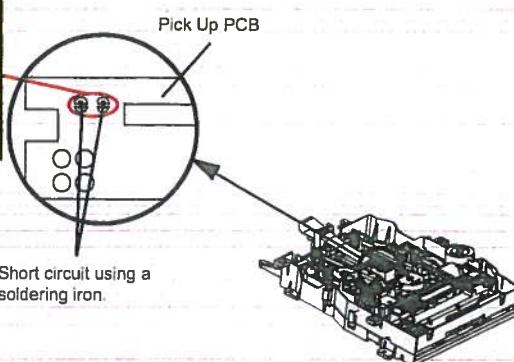


Fig. 1

## PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity. Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened. Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

There are 4 solder pads in the "white" circle. The top & bottom pads are shorted together from the factory and this solder must be removed for the DVD to operate.



**SANYO**

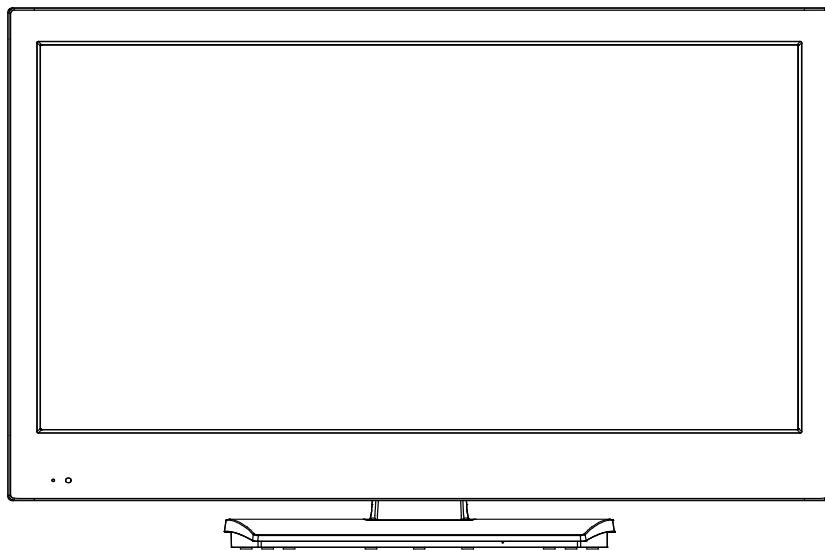
**DP32671**

**SANYO Factory Code Z6CF  
Service Reference NO. 585**

# **SERVICE MANUAL**

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**32" HDTV LCD / DVD Combo**



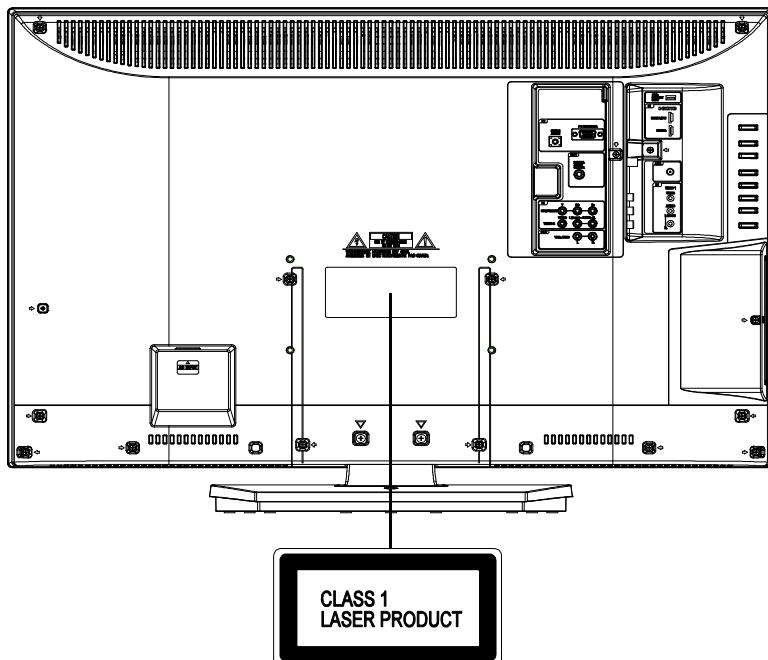
**ORIGINAL  
MFR'S VERSION A**

## **IMPOTANT WARNING**

### **CAUTION:**

DVD PLAYER IS A CLASS 1 LASER PRODUCT. HOWEVER THIS PLAYER USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE PLAYER CORRECTLY AS INSTRUCTED.

THE FOLLOWING CAUTION LABEL IS LOCATED ON THE REAR PANEL OF THE PLAYER.



(Printed on the Rear Panel)

WHEN THIS PLAYER IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS PLAYER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

## SERVICING NOTICES ON CHECKING

### 1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

### 2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

### 3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.

Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a  $\Delta$  mark, the designated parts must be used.

### 4. BE CAREFUL WITH THE LCD PANEL

Avoid a shock to the panel while servicing. Take enough care to deal with it.

### 5. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

### 6. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

#### (INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal [Note 2] should be more than 1M ohm by using the 500V insulation resistance meter [Note 1].
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

#### [Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

#### [Note 2]

External exposure metal: Antenna terminal  
Headphone jack

## HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

### 1. MODEL NUMBER and VERSION LETTER

The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.

### 2. PART NO. and DESCRIPTION

You can find it in your SERVICE MANUAL.

## IMPORTANT

When you exchange IC and Transistor with a heat sink, apply silicon grease (YG6260M) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damage to the IC and Transistor).

## WHEN REPLACING DVD DECK

### [ When removing the DVD Deck ]

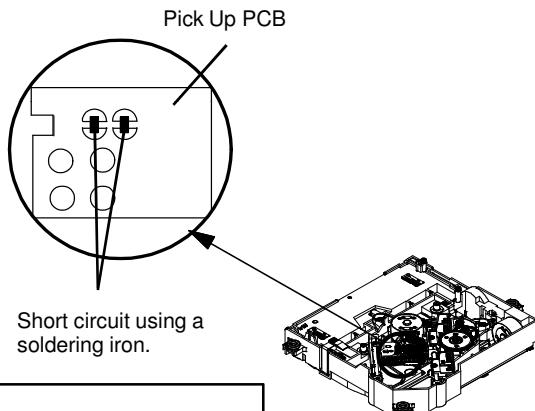
Before removing Pick Up PCB and DVD MT PCB connector, the short circuit the position shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

### [ When installing the DVD Deck ]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

#### NOTE

- Before your operation, please read “PREPARATION OF SERVICING”.
- Use the Lead Free solder.
- Manual soldering conditions
  - Soldering temperature:  $350 \pm 5^{\circ}\text{C}$
  - Soldering time: Within 4 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to keep the Flux smoke away from it.



**Note:**  
There are 4 solder pads. If the top & bottom pads are shorted together, this solder must be removed for the DVD to operate.

**Fig. 1**

## PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity. Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened. Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

## DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Stand A'ssy, Back Cabi Ass'y.  
**(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Slide the Rack Base toward the arrow direction by hand to release the lock. **(Refer to Fig. 1)**
3. Take out the Disc from the DVD Deck. Be careful not to scratch on the Disc.

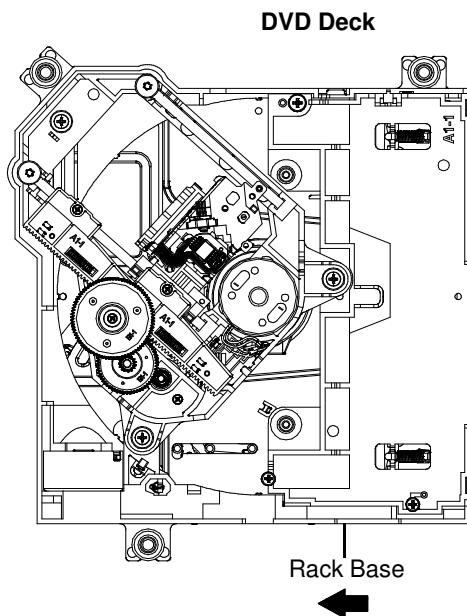
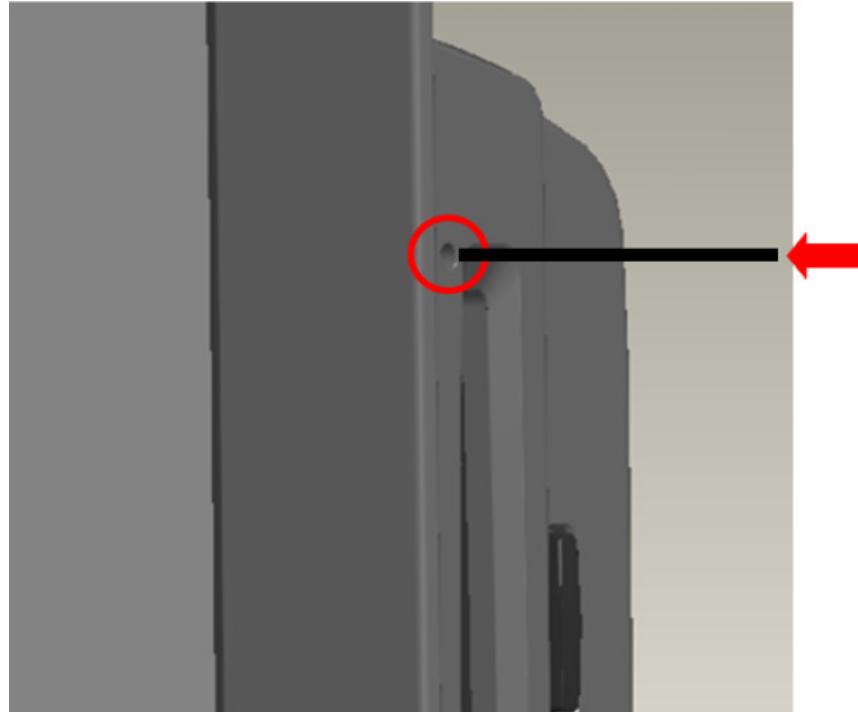


Fig. 1

## HOW TO DSM-5 DISC IRREGULAR EJECT

1. You must be take off power cord first and waiting until Disc stop then proceeding further.
2. Insert the long wood bar or steel bar (diameter



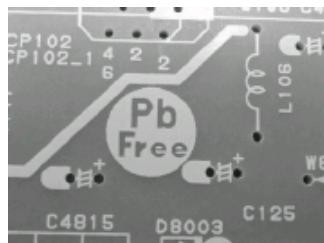
### **Caution:**

- Please take out Disc with the above method. If you use other method, it maybe NG.
- Use this method only emergency case. If you use it in case of DVD Unit is normal, it maybe NG.
- While Disc is playing back, reading or searching, do not take out it with this method.  
Disc maybe scratch if you take out it while it's reading.

## **ABOUT LEAD FREE SOLDER (PbF)**

### **Distinction of PbF PCB:**

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.  
(Please refer to figures.)



### **Caution:**

- Pb free solder has a higher melting point than standard solder;  
Typically the melting point is 86°F~104°F(30°C~40°C) higher.  
Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).  
In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.  
When soldering or unsoldering, completely remove all of the solder from the pins or solder area,  
and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

### **Recommendations**

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

## HOTEL MODE FUNCTION

To set the Hotel mode, please follow the steps below.

1. In power on mode, set the VOLUME to minimum.
2. Press and hold the VOLUME DOWN button on the front panel.
3. Simultaneously press and hold the MENU button on the remote control for more than 2 seconds.
4. The Hotel mode setting menu will appear.
5. Using the UP/DOWN button on the remote control, select the desired mode.  
Then press the ENTER button.
6. Using the LEFT/RIGHT button on the remote control,  
set the mode to desired setting.
7. Using the UP/DOWN button on the remote control, select the ENTER.  
Then press the ENTER button of remote control.
8. The Hotel mode has now been set up.



To reset the Hotel mode, please follow the steps below.

1. In power on mode, set the VOLUME to minimum.
2. Press and hold the VOLUME DOWN button on the front panel.
3. Simultaneously press and hold the MENU button on the remote control for more than 2 seconds.
4. The Hotel mode setting menu will appear.
5. Using the UP/DOWN button on the remote control, select the RESET.  
Then press the ENTER button on the remote control.
6. The setting items has now been returned to initial value.

Setting item	Setting value	Initial value	FUNCTION
Maximum volume	0~50	50	Setting of the maximum volume value.
Panel button	RESPOND/ NO RESPOND	RESPOND	Effective/invalid setting of main key operation. (*Note 1)
Menu button			Effective/invalid setting of Menu key operation of set and remote control. (*Note 1)
Input mode start	NORMAL/ TV/AV/ COMPONENT/ HDMI/PC	NORMAL	Setting of input source at power supply On. (*Note 2)
Reset	—	—	Various settings of the Hotel mode function return initial State.

Note 1) Even if setting it to "No Respond", the service mode function are effective.

Note 2) If setting it to "NORMAL", it start up in same input source when you turn off the power before.

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## GENERAL SPECIFICATIONS

G-1	TV System	LCD	LCD Size / Visual Size	31.51 inch / 800.4mmV
		LCD Type	Color TFT LCD	
		Number of Pixels	1366(H) x 768(V)	
		Double Scan	No	
		View Range	89/89 degree	
			89/89 degree	
		Bright Dot	n≤2	
		Zero Bright Dot Ratio	70%	
		Color System	NTSC	
		Speaker	2 Speaker	
G-2	DVD System	Position	Bottom	
		Size	1.6 x 4.8 inch	
		Impedance	8 ohm	
		Sound Output	Max	5.0W + 5.0W
			10%(Typical)	---
		Color System	NTSC	
		Disc	DVD-ROM, CD-ROM, CD-R/RW, DVD-R/-RW/-R DL	
		Disc Diameter	120 mm	
		Drive	DSM-5	
		Search speed	Fwd	4 step 4, 8, 16, 32 times
G-3	Tuning System		Actual	4 step 4, 8, 16, 3
		Rev	Actual	4 step 4, 8, 16, 3
		Slow speed	Fwd	4 step 1/16, 1/8,
			Actual	4 step 1/16, 1/8,
		Zoom	Zoom	2 step 2, 4 times
			Actual	
		Broadcasting System	Analog	US System M
			Digital	ATSC(8VSB)/QAM
		Tuner and System	1Tuner	
		Receive CH	Destination	US (W/CABLE)
G-4	Signal	CH Coverage		2~69, 4A, A-5~A-1, A~I, J~W, W+1~W+94
		Intermediate Frequency	Digital	44.00MHz
		Frequency	Analog	Picture(FP) Sound(FS) FP-FS
				45.75MHz 41.25MHz 4.50MHz
		Preset CH		No
		Stereo/Dual TV Sound		US-Stereo
		Tuner Sound Muting		Yes
		Video Signal	Input Level	1 V p-p/75 ohm
			Output Level	--
			S/N Ratio (Weighted)	--
G-5	Power	Horizontal Resolution at DVD Mode		--
				--
		RGB Signal	Output Level	--
		Audio Signal	Input Level	-8.0dBm/50k ohm
			Output Level	-12 dBm/ 1k ohm (-20dBFS, 0dBFS=2.0Vrms) 0-600mV /1k ohm
		Digital Output Level		0.5 V p-p/75 ohm
		S/N Ratio at DVD (Weighted)		85dB
		Harmonic Distortion		0.02% (1KHz)
		Frequency Response :	at DVD at Video CD at SVCD at CD	4 Hz - 44 KHz (96KHz) -- -- 4 Hz - 20 KHz
G-6	Regulation	Power Source	AC DC	120V, 60Hz --
		Power Consumption		94W at 120V 60Hz --
			at AC at DC	0.3W at 120V 60Hz Yes
		Stand by (at AC)		No
		Energy Star		-- kWh/Year
		NR Canada		
		Per Year		
		Protector	Power Fuse Safety Circuit IC Protector(Micro Fuse)	Yes Yes Yes
		Safety		UL(UL60065_7th)/cUL(CSA E60065_03)
		Radiation		FCC/IC
G-7	Temperature	Laser		DHHS (IEC60825-1)
		Operation		+5°C ~ +40°C
		Storage		-20°C ~ +60°C
G-8	Operating Humidity	Space Around Unit		10cm (4inch)
				Less than 80% RH

## GENERAL SPECIFICATIONS

G-9	Clock and Timer	Clock	No
		Sleep Timer	Max Time
		On Timer	Program
		Off Timer	Program
		Game Timer	No
		Timer Back-up (at Power Off Mode)	more than No
G-10	Remote Control	Unit	RC-SC
		Glow in Dark Remocon	No
		Remocon Format	SANYO
		Format	NEC
		Custom Code	38-C7 h
		Power Source	Voltage(D.C) 3V
			UM size x pcs UM-3 x 2 pcs
		Total Keys	50 Keys
		Keys	
		POWER	Yes
		DISPLAY/-	No
		DISPLAY	Yes
		"_"	Yes
		TV/DVD	Yes
		EJECT	Yes
		1	Yes
		2	Yes
		3	Yes
		4	Yes
		5	Yes
		6	Yes
		7	Yes
		8	Yes
		9	Yes
		0	Yes
		MUTE	Yes
		SLEEP	Yes
		SETUP/TV MENU	Yes
		DVD MENU	Yes
		ENTER	Yes
		Left	Yes
		Right	Yes
		Up	Yes
		Down	Yes
		CH+	Yes
		CH-	Yes
		VOL+	Yes
		VOL-	Yes
		CH+ / Up	No
		CH- / Down	No
		VOL+ / Right	No
		VOL- / Left	No
		EXIT/CANCEL	Yes
		TOP MENU	Yes
		SEARCH-	Yes
		PLAY	Yes
		SEARCH+	Yes
		SKIP-	Yes
		SUBTITLE	Yes
		STOP	Yes
		SKIP+	Yes
		SLOW-	Yes
		PAUSE	Yes
		PLAY MODE	Yes
		SLOW+	Yes
		AUDIO	Yes
		RETURN	Yes
		REPEAT A-B	Yes
		ANGLE	Yes
		Picture Size	Yes
		MARKER	Yes
		CCD/JUMP	Yes
		Recall(Quick View)/ZOOM	Yes
		INPUT SELECT	Yes
		FREEZE	No

## GENERAL SPECIFICATIONS

G-11	Features	Auto Shut Off	Yes
		Auto Search	No
		Power On Memory	Yes
		Hotel Mode	Yes
		Comb Filter	Yes 3-D
		Game Position	No
		Auto Setup	Yes
		Language	No
		TV Location	Yes
		E-POP Demo	No
		Signal Type	Yes
		Automatic Search	Yes
		Auto Setup(in Setup Menu)	Yes
		Picture Setting(TV)	Yes
		Picture Preference	Yes
		Brightness , Contrast , Color	Yes
		Tint	Yes
		Sharpness	Yes
		Color Temperature	Yes
		DNR	Yes
		Backlight	Yes
		Picture Setting(PC)	Yes
		HOR Position , VER Position	Yes
		Phase, Clock	Yes
		Red, Green, Blue	No
		Auto Adjust	Yes
		Audio	Yes
		MTS	Yes
		Equalizer Mode	Yes
		Tone Control (Bass/Treble/Balance)	Yes
		Equalizer Setting	Yes
		Stable Sound	No
		Surround	Yes
		Auto Volume(Automatic Volume Control)	Yes
		BBE	No
		SRS WOW (SRS 3D/Focus/Tru Bass)	No
		HDMI Audio	Yes
		Speakers(Variable Audio Out)	Yes
		Tuning	Yes
		CH Program	Yes
		Air/Cable	Yes
		ADD/DELETE	Yes
		Label	Yes
		CH Label	Yes
		Video Label	Yes
		Favorite CH	No
		V-Chip	Yes
		Type	USA Type
		RRT Setup	Yes
		Lock	No
		Hotel Lock	No
		Channel Lock	No
		Video Lock	No
		Panel Lock	No
		Menu Language	English
		DBC (Dynamic Backlight Control)	Yes
		Dynamic Gamma	No
		Signal Meter (DTV Signal)	Yes
		Closed Caption	Yes
		CC Advanced	Yes
		V-Chip Clear	Yes
		V-Chip Protect Temporary Unlock	No
		Picture Size	Yes
		Film Mode	Yes
		Auto Aspect	No
		PFC(Power Factor circuit)	No
		Freeze frame	No
		PIP/POP	No
		Direct Input Selection	Yes
		PC Plug and Play	No
		Energy Star LOGO (OSD)	Yes
		PC Standby	Yes
		USB	Yes (Some USB devices may not be usable.)
		Time Shift	No
		Playback File DivX	No

## GENERAL SPECIFICATIONS

	MPEG-4 Visual	No
	H.264/MPEG-4 AVC	No
	WMV	No
	Real Media	No
	MP3	No
	WMA	No
	MPEG-4 AAC	No
	WAV	No
	FLAC	No
	JPEG	No
	iPod	No
	iPhone	No
	iPad	No
	HDD	No
	Software Update	Yes
Digital Out	Dolby Digital	Yes
	MPEG	No
	PCM	Yes
	DTS	No
PC Monitor Input	VGA (640x480)	Yes (60,72,75Hz)
	VGA (720x400)	Yes (70Hz)
	WVGA (848x480)	No
	SVGA (800x600)	Yes (56,60,72,75Hz)
	XGA (1024x768)	Yes (60,70,75Hz)
	WXGA (1280x768)	Yes (60Hz)
	WXGA (1280x720)	Yes (60Hz)
	WXGA (1360x768)	Yes (60Hz)
	SXGA (1280x1024)	No
	WXGA+ (1440x900)	No
	FHD (1920x1080)	No
HDMI Input	VGA (640x480)	Yes
	720x480i (4:3)	Yes (60Hz)
	720x480i (16:9)	Yes (60Hz)
	720x480p (4:3)	Yes (60Hz)
	720x480p (16:9)	Yes (60Hz)
	720x576i (4:3)	No
	720x576i (16:9)	No
	720x576p (4:3)	No
	720x576p (16:9)	No
	1280x720p	Yes (60Hz)
	1920x1080i	Yes (60Hz)
	1920x1080p	Yes (60Hz)
	CEC (ORION Standard)	No
	Deep Color	No
	xvYCC	No
DVI to HDMI Input	VGA (640x480)	Yes (60,72,75Hz)
	VGA (720x400)	Yes (70Hz)
	WVGA (848x480)	No
	SVGA (800x600)	Yes (56,60,72,75Hz)
	XGA (1024x768)	Yes (60,70,75Hz)
	WXGA (1280x768)	Yes (60Hz)
	WXGA (1280x720)	Yes (60Hz)
	WXGA (1360x768)	Yes (60Hz)
	SXGA (1280x1024)	No
	WXGA+ (1440x900)	No
	FHD (1920x1080)	No
Component Input		Yes
	720x480i (4:3)	Yes (60Hz)
	720x480i (16:9)	Yes (60Hz)
	720x480p (4:3)	Yes (60Hz)
	720x480p (16:9)	Yes (60Hz)
	720x576i (4:3)	No
	720x576i (16:9)	No
	720x576p (4:3)	No
	720x576p (16:9)	No
	1280x720p	Yes (60Hz)
	1920x1080i	Yes (60Hz)
	1920x1080p	No
Wall Mount	Size W x H(mm)	Yes (200 x 100)
	Screw Size	M6 x 10
Stand	Tilt	No
	Swivel	No

## GENERAL SPECIFICATIONS

Features (DVD/CD)	Progressive Video Out	No
	Digital Out	(Dolby Digital) (MPEG) (PCM) (DTS)
		Yes Yes Yes No (Possible to output)
	Decode(Down)	(Dolby Digital) (DTS) (SACD) (DVD-Audio)
		Yes No No No
	Surround	No
	Dynamic Range Control	Yes
	Fast Play (w/Audio, Subtitle)	No
	Audio DAC	192kHz / 24bit
	BNR	No
	Disc Navigator	Yes
	TV Screen	4:3 (Letter Box, Pan Scan) 16:9 (Wide)
		Yes Yes
	Playback Form DVD-Video	Yes (DVD-ROM, DVD-R/-RW/-R DL)
	DVD-VR	No
	CPRM	No
	Logo (RW Compatible)	No
	DVD+VR	No
	VCPS	No
	AVCREC	No
	CPRM	No
	CDDA	Yes (CD-ROM, CD-R/RW)
	Data Disc	Yes (CD-ROM, CD-R/RW, DVD-R/-RW/-R DL)
	Video CD	No
	SVCD	No
	SACD	No
	DVD-Audio	No
	CPPM	No
	Fujicolor CD	Yes (CD-ROM, CD-R/RW)
	KODAK Picture	Yes (CD-ROM, CD-R/RW)
	DTS CD	Yes (CD-ROM, CD-R/RW, Digital Out only)
Playback File	DivX	No
	DMF Support	No
	MPEG-4 Visual	No
	H.264/MPEG-4 AVC	No
	WMV	No
	Real Media	No
	MP3	Yes
	WMA	Yes
	MPEG-4 AAC	No
	WAV	No
	FLAC	No
	JPEG	Yes
	AVCHD	No
	Macrovision	Yes (No Video Out)
	Closed Caption signal in VBI (DVD Playback)	Yes
Play Mode	CGMS-A in XDS	Yes
	A-B Repeat	Yes
	Repeat	Yes
	Random (Shuffle)	Yes
	Program	Yes
	Search Mode (Jump)	Yes
	Screen Saver	No
Auto Power Off		No
Power Resume		No
Auto Stop		Yes
Tray Lock		No

## GENERAL SPECIFICATIONS

G-12	<b>Accessories</b>	Owner's Manual	Language w/Guarantee Card	English / Spanish Yes	
		Remote Control Unit		Yes	
	Rod Antenna	Poles		No	
		Terminal	--	--	
	Loop Antenna	Terminal		No	
		--	--	--	
	U/V Mixer			No	
	DC Car Cord (Center+)			No	
	Guarantee Card			No	
	Warning Sheet			No	
	Circuit Diagram			No	
	Antenna Change Plug			No	
	Service Facility List			No	
	Important Safeguard			No	
	Dew/AHC Caution Sheet			No	
	Quick Set-up Sheet			No	
	Battery			No	
		UM size x pcs		--	
		OEM Brand		--	
	AC Adapter			No	
	AC Cord (for AC Adapter)			No	
	AC Cord			Yes	
	Cable Tie			No	
	AV Cord (2Pin-1Pin)			No	
	Registration Card (NDL Card)			No	
	300 to 75ohm Antenna Adapter			No	
	Sheet Information (FCC)			No	
	Sheet Information (DTV)			No	
	Sheet Information (Return)			Yes	
	Sheet Information (Picture Quality)			Yes	
	Sheet Information (Sheet Set Up)			No	
	Sheet Information (HDMI)			No	
	Sheet Information (CEA)			No	
	Cleaning Cloth			No	
	Stand Screw			Yes(5pcs)	
	Stand			Yes	
	Frame Stand			Yes	
G-13	<b>Interface</b>	Switch	Side	Power (Tact)	Yes
				Channel Up/Menu Up/Play	Yes
				Channel Down/Menu Down/Stop	Yes
				Volume Up/Menu >	Yes
				Volume Down/Menu <	Yes
				Menu	Yes
				Play	No (CH+ Alternative)
				Eject	Yes
				Skip+, Search+	No
				Skip-, Search-	No
				Still/Pause	No
				Stop	No (CH- Alternative)
				Main Power SW	No
			Rear	Input Select/Enter	Yes
				Main Power SW	No
	<b>Indicator</b>			Power/Stand-By	Yes (Green / Red)
				PC Stand-By	Yes (Red Blinking)
				Power Wake Up	No
				On Timer	No
	<b>Terminals</b>	Side	Video Input 1	RCA x 1	
				RCA x 2(L/MONO, R)	
				No	
				HDMI Input 1	Yes
			Analog Audio	PC Audio Input Alternative	
				Yes	
			HDMI Input 2	No	
				Analog Audio	
			VHF/UHF Antenna Input	F Type	
			USB (Software Update)	Yes	

## GENERAL SPECIFICATIONS

	Terminals	Rear	Video Input 2	RCA x 1
			Audio Input 2	RCA x 2(L/MONO, R)
		S - Input 2		No
		Video Output		No
		Audio Output		RCA x 2 (Variable) (L, R)
		Component Input 1		RCA x 3
		Analog Audio		Video Input 2 Audio Input Alternative
		Component Input 2		No
		Analog Audio		No
		Sub Woofer Out		No
		PC Monitor Input		Yes
		Analog Audio		Mini Pin Jack(φ3.5), STEREO
		Digital Audio Output		Coaxial
		DC Jack (Center +)		No
		Video Input 3		No
		Audio Input 3		No
		S - Input 3		No
		Other Terminal		No
		AC Inlet		Yes
		USB (JPEG/MP3/Software Update)		No
G-14	Set Size		Approx. W x D x H (mm)	760.0 x 213.3 x 554.5
			w/o Handle, Stand Approx. W x D x H (mm)	760.0 x 81.0 x 505.0
G-15	Weight		Net (Approx.)	8.9kg (19.6lbs)
			Net w/o Handle, Stand (Approx.)	8.3kg (18.3lbs)
			Gross (Approx.)	12.1kg (26.7lbs)
			Gross w/Master Carton (Approx.)	--- kg ( --- lbs)
G-16	Carton	Master Carton		No
		Content		--- Sets
		Material		--- / ---
		Dimensions W x D x H(mm)		---
		Description of Origin		---
		Gift Box	Material	Double/White
			W/Color Photo Label	No
			W/Handle	No
			Dimensions W x D x H(mm)	850 x 176 x 600
			Description of Origin	No
		Drop Test		1 Corner / 3 Edges / 6 Surfaces
			Height (cm)	62
			Container Stuffing (40' container)	546 Sets/40' container
		w/Pallet		No
		w/Wrapping		No
G-17	Material	Cabinet	Front	PS 94HB (PIANO)
			Rear	PS 94V0 NON-DECABROM
			Stand	PS 94HB
			Jack Panel	--
		PCB	Non-Halogen Demand	No
			Eyelet Demand	Yes
G-18	Environment	Environmental standard requirement		Green procurement of SANYO
		Pb-free		Phase3(Phase3A)
			Measures for Whisker	Yes
		Rohs		Yes

## DISASSEMBLY INSTRUCTIONS

### 1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

#### CAUTION

Be careful not to remove the LVDS cable forcibly, because the LVDS cable may be damaged.

#### 1-1: STAND ASS'Y (Refer to Fig. 1-1)

1. Remove the 2 screws (1).
2. Remove the Stand Ass'y in the direction of arrow.

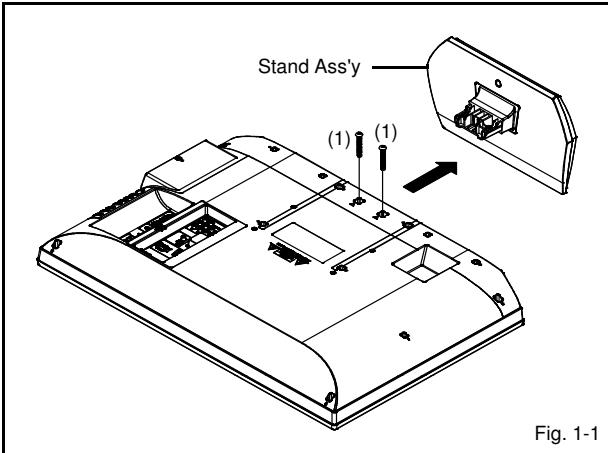


Fig. 1-1

#### 1-2: BACK CABI ASS'Y (Refer to Fig. 1-2)

1. Remove the screw (1).
2. Remove the 15 screws (2).
3. Remove the Back Cabi Ass'y in the direction of arrow.

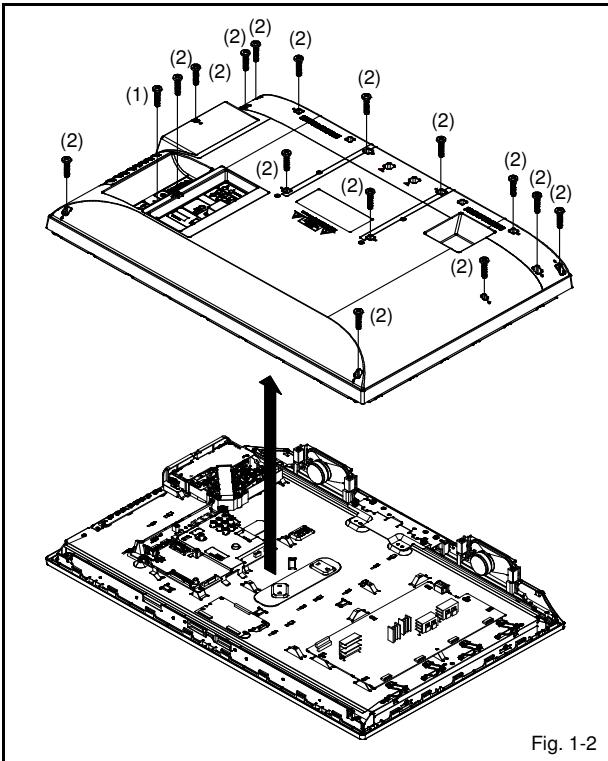


Fig. 1-2

#### 1-3: DVD MT PCB / LOADER UNIT (Refer to Fig. 1-3)

1. Remove the 4 screws (1).
2. Remove the Shield Deck in the direction of arrow (A).
3. Remove the screw (1).
4. Remove the DVD MT PCB in the direction of arrow (B).
5. Disconnect the following connectors:
6. (CP2301, CP2302, CP2303, CP3002 and CP4201).
7. Remove the Loader Unit in the direction of arrow (C).

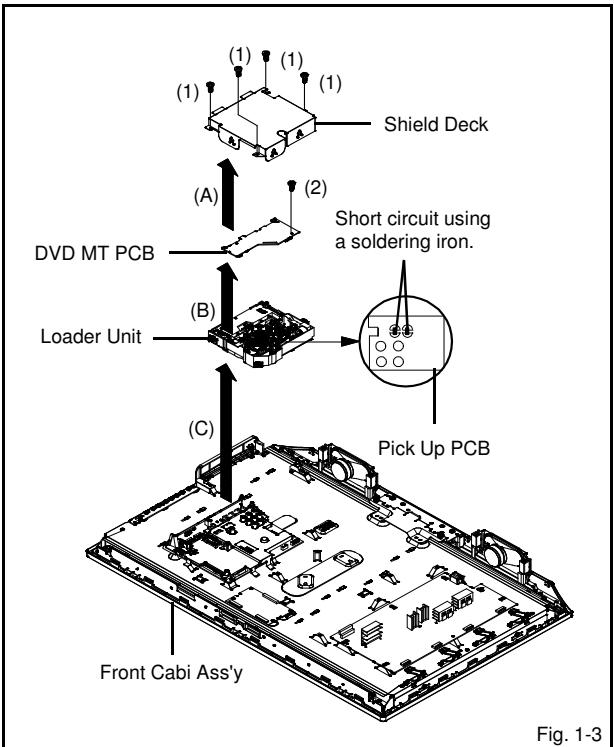


Fig. 1-3

#### NOTE

1. Before your operation, please read "PREPARATION OF SERVICING".
2. Use the Lead Free solder.
3. Manual soldering conditions
  - Soldering temperature:  $350 \pm 5^\circ\text{C}$
  - Soldering time: Within 4 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

## DISASSEMBLY INSTRUCTIONS

### 1-4: MAIN PCB ASS'Y (Refer to Fig. 1-4)

1. Remove the 6 screws (1).
2. Remove the Plate Jack Ass'y in the direction of arrow (A).
3. Remove the Shield Jack in the direction of arrow (B).
4. Disconnect the following connectors:  
**(CP301, CP2202, CP2806, CP3003 and CP6201).**
5. Remove the Main PCB Ass'y in the direction of arrow (C).

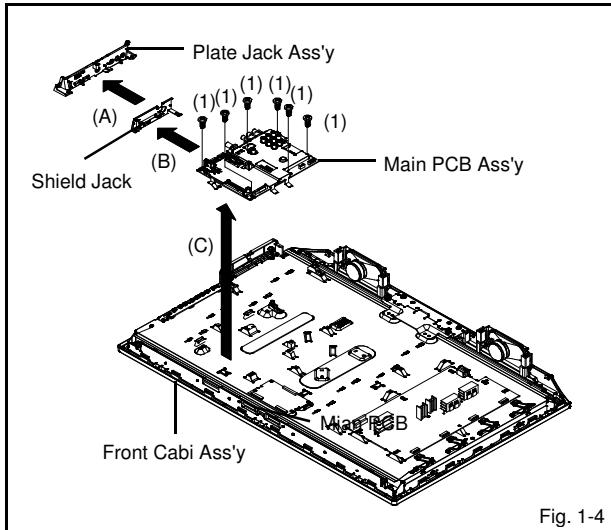


Fig. 1-4

### 1-5: POWER PCB / REMOCON PCB / OPERATION PCB

(Refer to Fig. 1-5)

1. Disconnect the following connectors:  
**(CP7001, CP7002, CP7003 and CP7004).**
2. Remove the 7 screws (1)
3. Remove the Power PCB in the direction of arrow (A).
4. Remove the screw (2)
5. Remove the Operation PCB in the direction of arrow (B).
6. Unlock the 2 supports (3).
7. Remove the Remocon PCB in the direction of arrow (C).

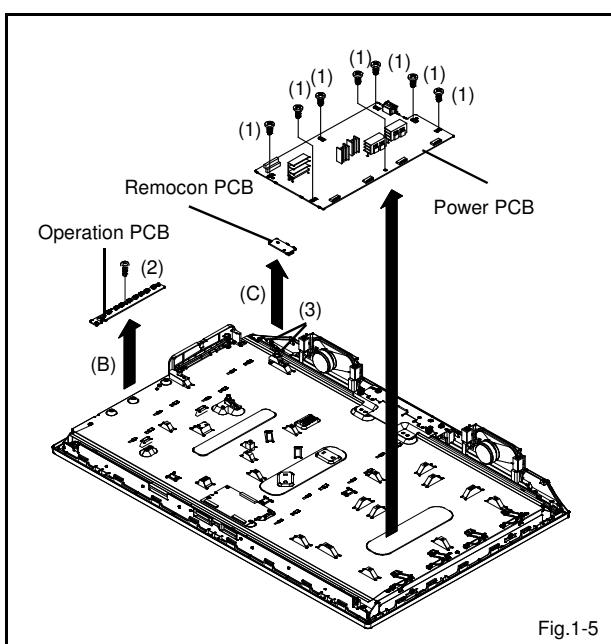


Fig.1-5

## DISASSEMBLY INSTRUCTIONS

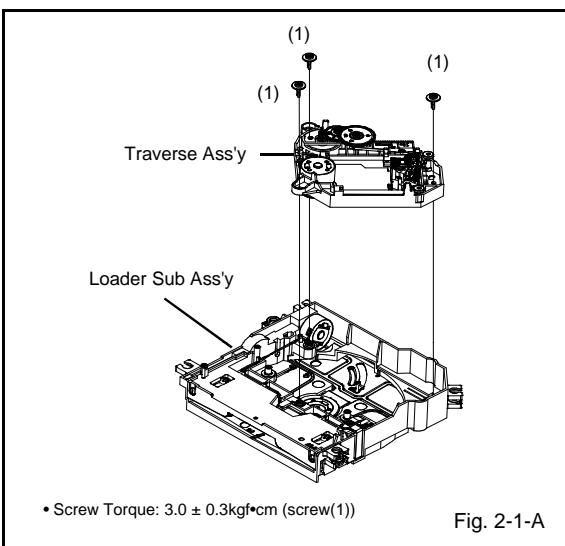
### 2. REMOVAL OF DVD DECK PARTS

#### NOTE

1. Disassemble only the DVD DECK PARTS listed here. Minute adjustments are needed if the disassembly is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

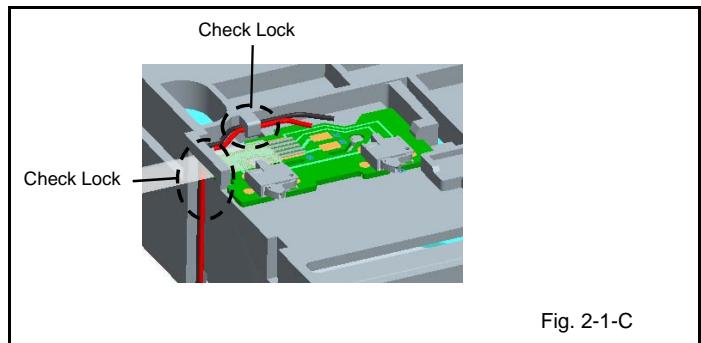
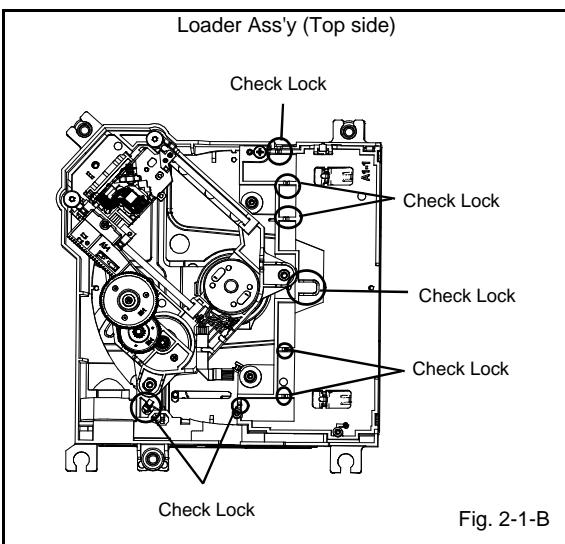
#### 2-1: TRAVERSE ASS'Y/LOADER SUB ASS'Y (Refer to Fig. 2-1-A)

1. Remove the 3 screws (1).
2. Remove the Traverse Ass'y.



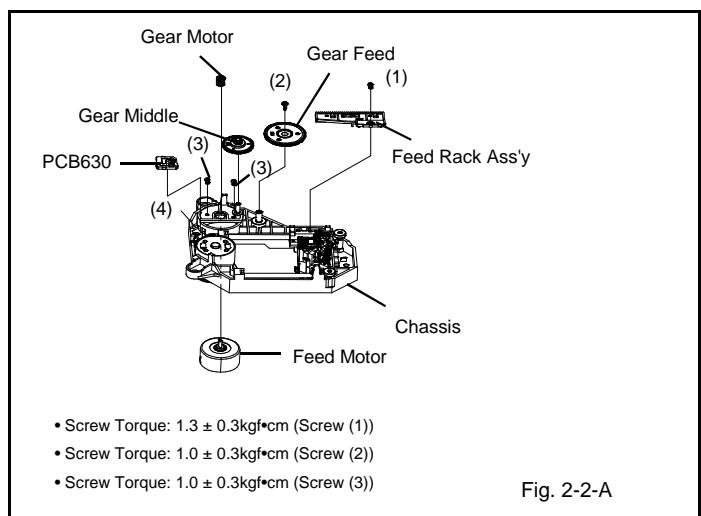
#### NOTE

1. In case of the Traverse Ass'y installation, hook the wire on the Loader Ass'y as shown Fig. 2-1-B to Fig. 2-1-C.



#### 2.2: FEED RACK ASS'Y/GEAR FEED/GEAR MOTOR/ GEAR MIDDLE/FEED MOTOR/PCB630 (Refer to Fig. 2-2-A)

1. Remove the screw (1).
2. Remove the Feed Rack Ass'y.
3. Remove the screw (2).
4. Remove the Gear Feed.
5. Remove the Gear Middle.
6. Remove the Gear Motor.
7. Remove the 2 screws (3).
8. Remove the Feed Motor.
9. Unlock the support (4).
10. Remove the PCB630.



## DISASSEMBLY INSTRUCTIONS

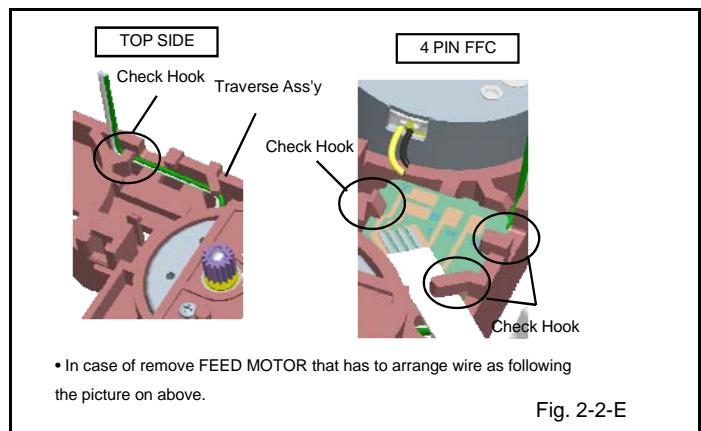
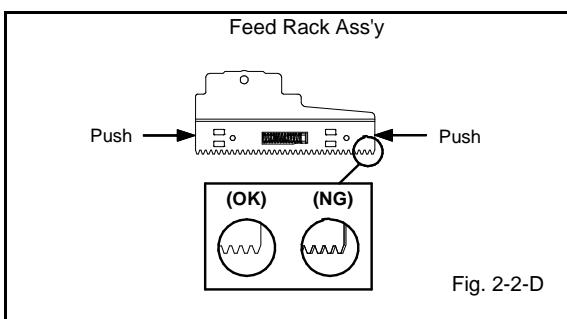
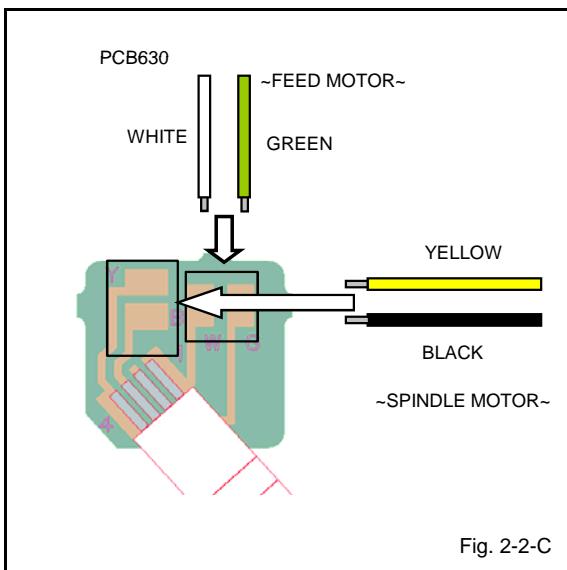
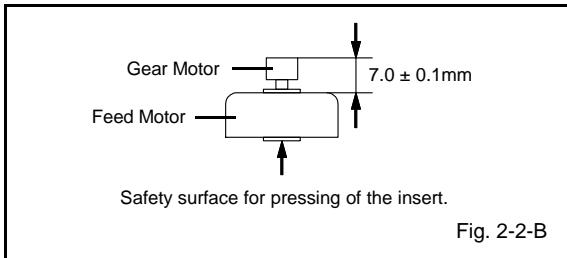
### NOTE

1. In case of the Gear Motor installation, check if the value of the Fig. 2-2-B is correct.
2. When installing the wire of the PCB630 install it correctly as Fig. 2-2-C.

Manual soldering conditions

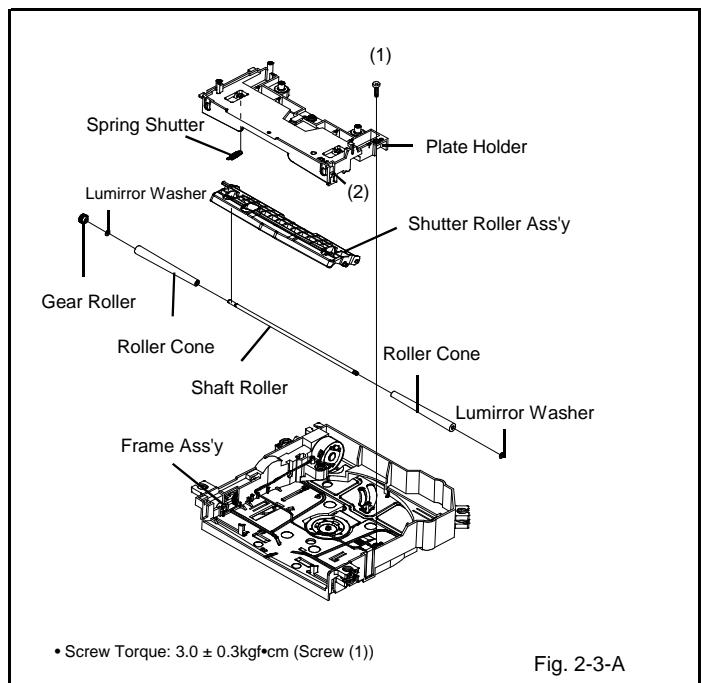
- Soldering temperature:  $350 \pm 5^\circ\text{C}$
- Soldering time: Within 4 seconds
- Soldering combination: Sn-3.0Ag-0.5Cu

3. When installing the Feed Rack Ass'y, push both ends to align the teeth as shown Fig. 2-2-D. Then install it.
4. After the assembly of the Traverse Ass'y, hook the wire on the Traverse Ass'y as shown Fig. 2-2-E.



### 2.3: SPRING SHUTTER/PLATE HOLDER/SHUTTER ROLLER ASS'Y/ROLLER ASS'Y/GEAR ROLLER/LUMIRROR WASHER/ROLLER CONE/SHAFT ROLLER (Refer to Fig. 2-3-A)

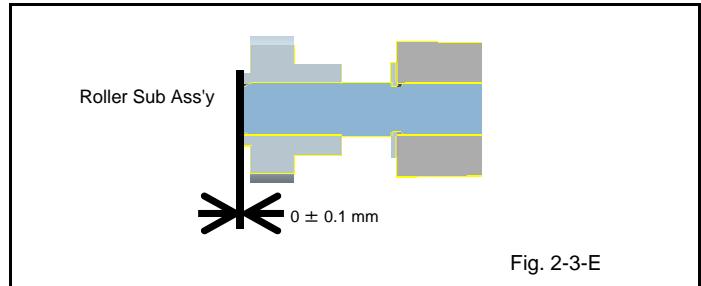
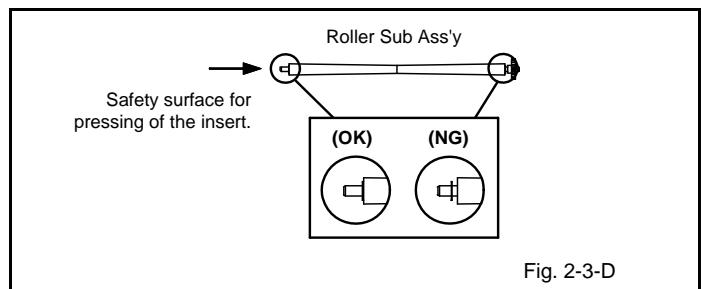
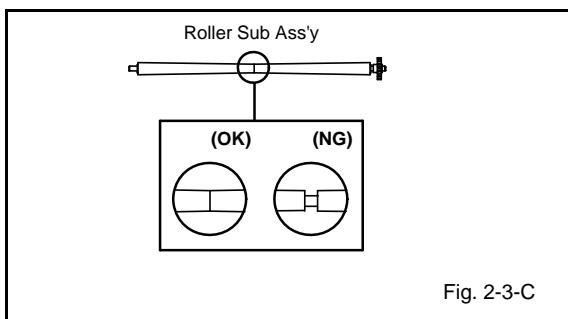
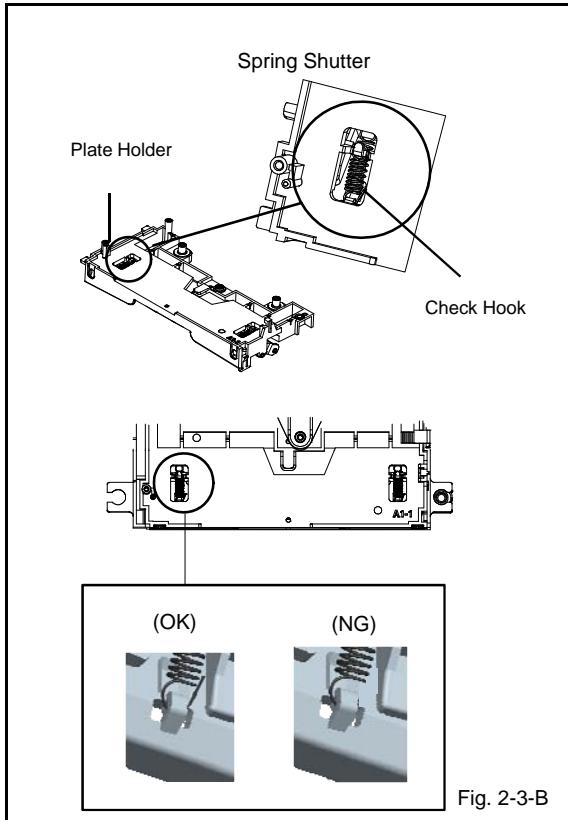
1. Remove the Spring Shutter.
2. Remove the screw (1).
3. Unlock the support (2).
4. Remove the Plate Holder.
5. Remove the Shutter Roller Ass'y.
6. Remove the Roller Ass'y.
7. Remove the Gear Roller.
8. Remove the Lumirror Washer.
9. Remove the Roller Cone.
10. Remove the Shaft Roller.



## DISASSEMBLY INSTRUCTIONS

### NOTE

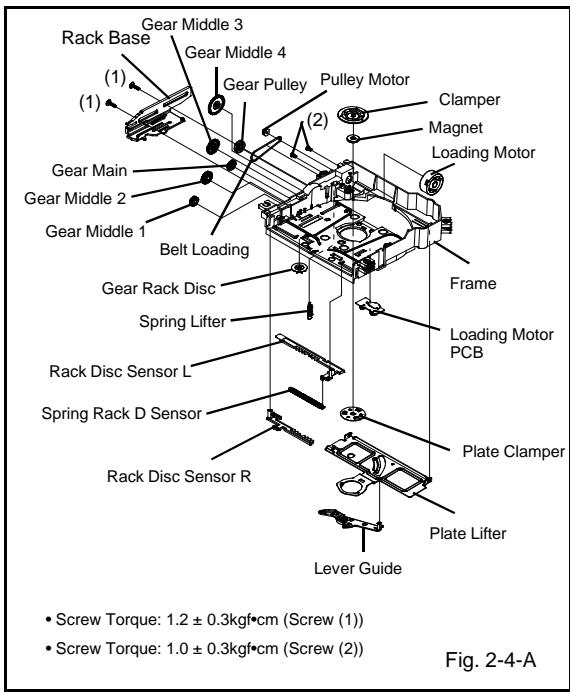
1. In case of the Shutter Roller Ass'y installation, check if the value of the Fig. 2-3-B is correct.
2. In case of the Roller Cone installation, install correctly as Fig. 2-3-C.
3. In case of the Lumirror Washer installation, install correctly as Fig. 2-3-D.
4. In case of the Gear Roller installation, check if the value of the Fig. 2-3-E is correct.



### 2.4: RACK BASE/GEAR MIDDLE4/BELT LOADING/GEAR PULLEY/ GEAR MIDDLE3/GEAR MAIN/GEAR MIDDLE1/GEAR MIDDLE2/ LOADING MOTOR/PULLEY MOTOR/CLAMPER/MAGNET/ PLATE CLAMPER/SPRING LIFTER/PLATE LIFTER/LEVER GUIDE/ LOADING MOTOR PCB/RACK DISC SENSOR R/RACK DISC SENSOR L/SPRING RACK D SENSOR/GEAR RACK DISC (Refer to Fig. 2-4-A)

1. Remove the 2 screws (1).
2. Remove the Rack Base.
3. Remove the Gear Middle 4.
4. Remove the Belt Loading.
5. Remove the Gear Pulley.
6. Remove the Gear Middle 3.
7. Remove the Gear Main.
8. Remove the Gear Middle 1.
9. Remove the Gear Middle 2.
10. Remove the 2 screws (2).
11. Remove the Loading Motor.
12. Remove the Pulley Motor.
13. Remove the Clamper.
14. Remove the Magnet.
15. Remove the Plate Clamper.
16. Remove the Spring Lifter.
17. Remove the Plate Lifter.
18. Remove the Lever Guide.
19. Remove the Loading Motor PCB.
20. Remove the Rack Disc Sensor R.
21. Remove the Rack Disc Sensor L.
22. Remove the Spring Rack D Sensor.
23. Remove the Gear Rack Disc.

## DISASSEMBLY INSTRUCTIONS



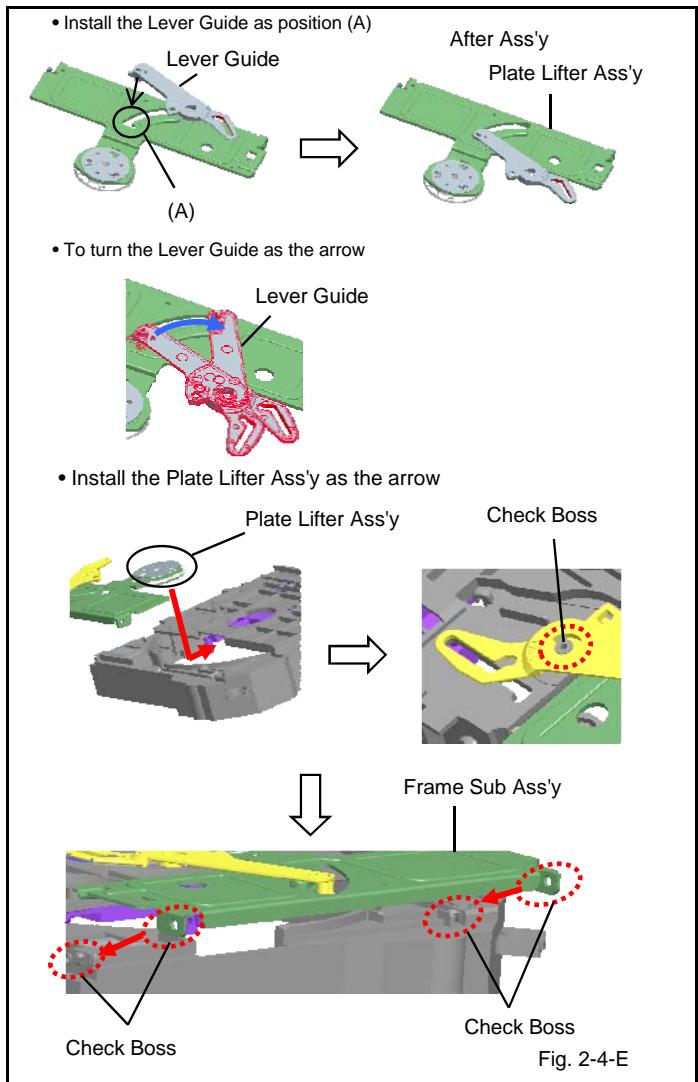
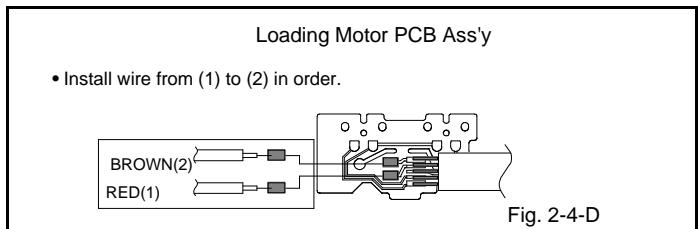
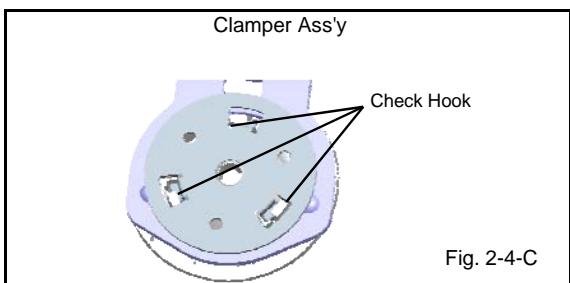
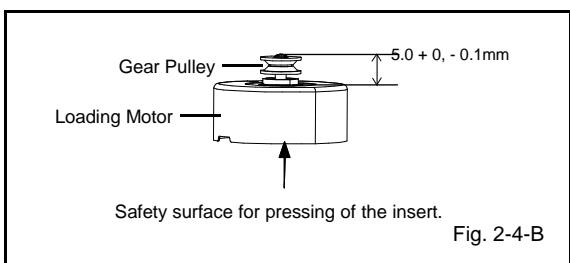
### NOTE

1. In case of the Gear Pulley installation, check if the value of the Fig. 2-4-B is correct.
2. In case of the Clamper Ass'y installation, check if the value of the Fig. 2-4-C is correct.
3. When installing the wire of the Loading Motor PCB Ass'y, install it correctly as Fig. 2-4-D.

Manual soldering conditions

- Soldering temperature:  $350 \pm 5^\circ\text{C}$
- Soldering time: Within 4 seconds
- Soldering combination: Sn-3.0Ag-0.5Cu

4. In case of the Plate Lifter Ass'y installation, install correctly as Fig. 2-4-E.
5. In case of the Rack Base installation, install correctly as Fig. 2-4-F.



## DISASSEMBLY INSTRUCTIONS

- Install the Rack Base as the arrow (1)
- Install Boss of Rack Base as the arrow (2)

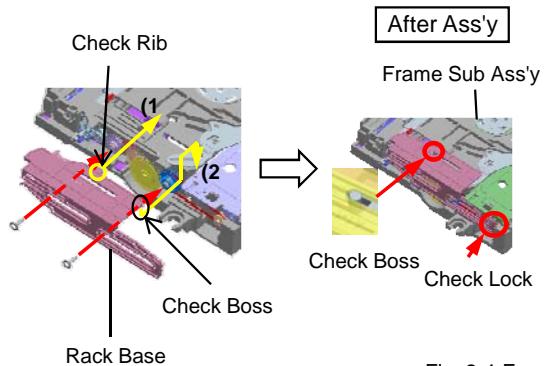


Fig. 2-4-F

### 2-5: FFC WIRE HANDLING

1. When installing the FFC, fold it correctly and install it as shown from Fig. 2-5-A to Fig. 2-5-C.

#### NOTE

1. Do not make the folding lines except the specified positions for the FFC.

[ 22 pin FFC ]



Fig. 2-5-A

[ 4 pin FFC ]

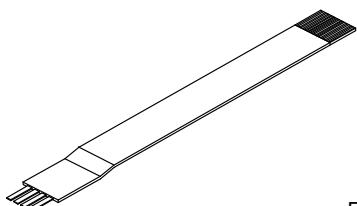


Fig. 2-5-B

[ 5 pin FFC ]

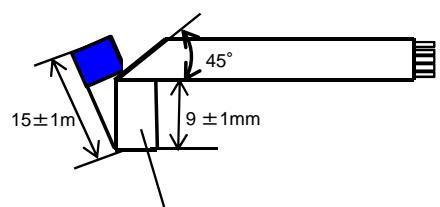


Fig. 2-5-C

# DISASSEMBLY INSTRUCTIONS

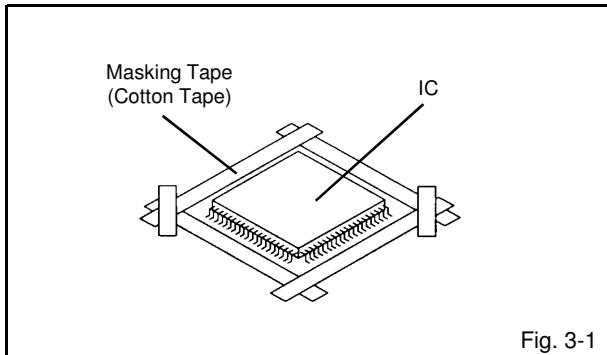
## 3. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

### REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. (Refer to Fig. 3-1.)

#### NOTE

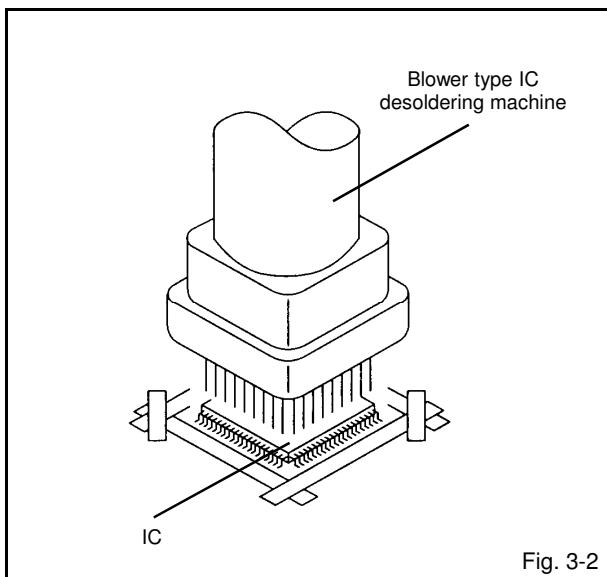
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. (Refer to Fig. 3-2.)

#### NOTE

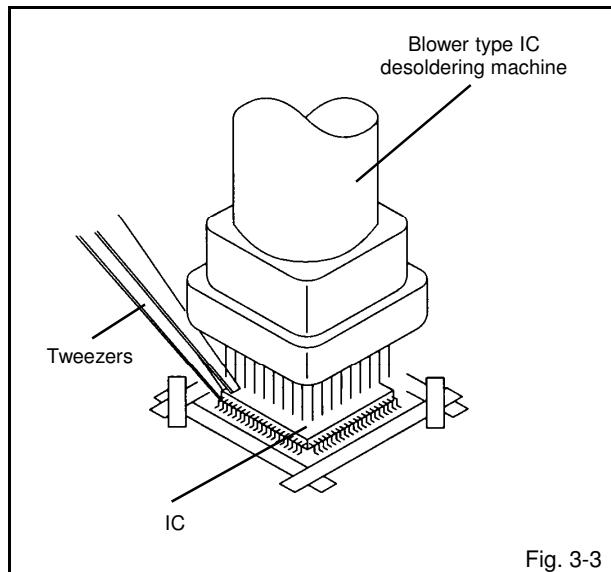
Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. (Refer to Fig. 3-3.)

#### NOTE

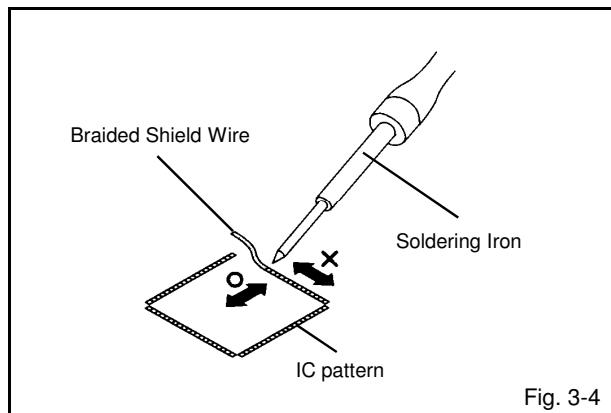
Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.



4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. (Refer to Fig. 3-4.)

#### NOTE

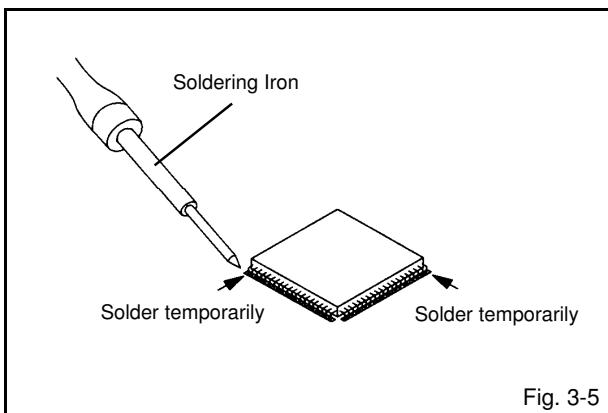
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



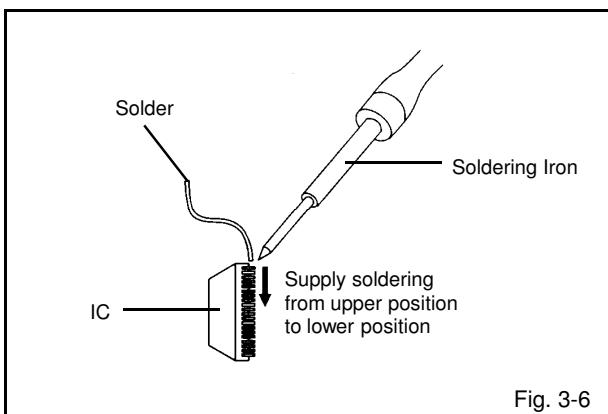
## DISASSEMBLY INSTRUCTIONS

### INSTALLATION

- Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. (Refer to Fig. 3-5.)



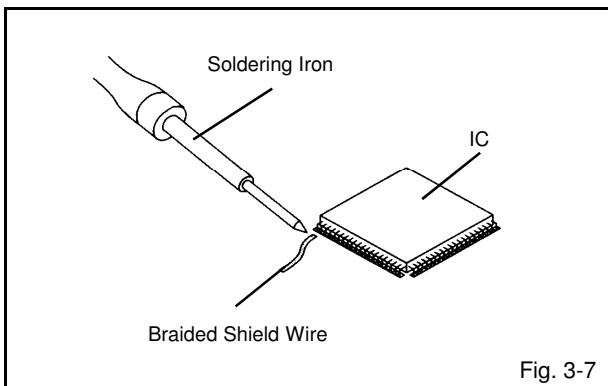
- Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. (Refer to Fig. 3-6.)



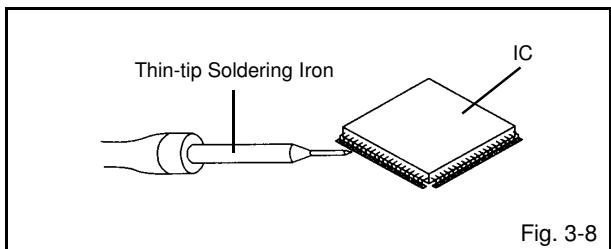
- Absorb the solder left on the lead using the Braided Shield Wire. (Refer to Fig. 3-7.)

### NOTE

Do not absorb the solder to excess.



- When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. (Refer to Fig. 3-8.)



- Finally, confirm the soldering status on four sides of the IC using a magnifying glass. Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

### NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

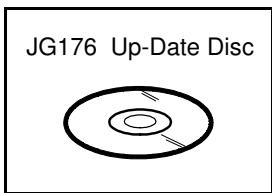
## SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than a the standard time in the appropriate condition. (See below chart.)

<b>Set Condition</b>	<b>Set Key</b>	<b>Remocon Key</b>	<b>Standard Time</b>	<b>Operations</b>
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
DVD mode (No disc)	VOL. DOWN (Minimum)	4	2 sec.	Initialization of factory DVD data.
ALL mode	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
TV mode	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	STOP	1	2 sec.	Check of the firmware version. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for normal servicing.
DVD mode (No disc)	STOP	7	2 sec.	Releasing of PARENTAL LOCK. Refer to the "PARENTAL CONTROL - RATING LEVEL".
POWER ON	VOL. DOWN (Minimum)	SETUP/TV MENU	2 sec.	Releasing of HOTEL MODE FUNCTION Refer to the "HOTEL MODE FUNCTION".

## SERVICING FIXTURES AND TOOLS



Ref. No.	Part No.	Parts Name	Parts Name
JG176	APJG176161	Up-Date Disc	Up-Date of the Firmware

## RE-WRITE FOR DVD FIRMWARE

1. Turn on the power, and set the DVD mode.
2. Confirm that the "No Disc" will be appeared on the screen.
3. Insert Up-date disc.
4. When disc is read normally, Update is started and "Upgrade file DETECTED" "File Copying" is displayed.  
After 5 seconds, displayed words is changed to "Do not power off", "UPGRADING" (Black Screen) (**Refer to Fig. 1**), then update disc is ejected.  
**NOTE: After this, please never turn off AC. If you turn off AC, update fails. When update fails, update by CD-R can not be carried out after it. Therefore please be careful enough**

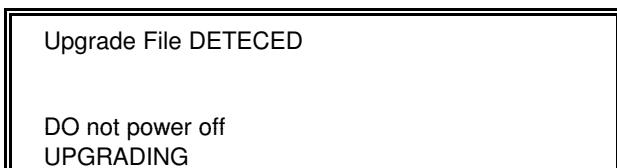


Fig. 1

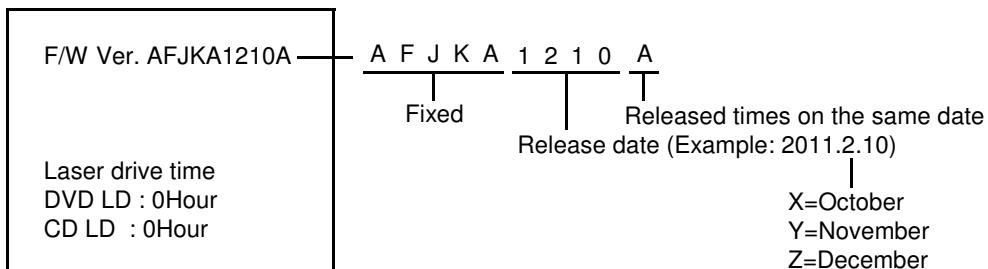
5. After the Up-Date, Logo screen will appear.
6. After update was finished, "Power OFF/ON reset" is carried out automatically  
Then, Screen is changed to Logo screen.
7. Unplug the AC cord, then plug it in.

### After the write, set to the initializing of shipping.

8. Turn on the power, and set the DVD mode.
9. Press both VOL. DOWN button on the set and Channel button (4) on the remote control for more than 2 seconds.  
The "Factory Initial Complete" will appear on the screen.
11. Then unplug the AC cord, and plug it in.

### CHECK FOR THE FIRMWARE VERSION

12. Turn on the power, and set the DVD mode.
13. Press both Channel button (1) on the remote control and the STOP button on the set for more than 2 seconds.  
Firmware version will be displayed on the top left of the screen.



When the changed version displays, the Re-write will be completed.

14. Turn off the power

## WHEN REPLACING EEPROM (MEMORY) IC

### CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION

Initial total of MEMORY IC, POWER ON total hours and MICON VERSION can be checked on the screen. Total hours are displayed in 16 system of notation.

**NOTE: If you set a factory initialization, the total hours is reset to "0".**

Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the ALL mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button (8) on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, turn off the power.

NOTE: The each item value might be different according to each set.

CHECK SUM : 6225	Initial setting data check sum.
LCD PWR ON : 0000	POWER ON total hours. = (16 x 16 x 16 x thousands digit value) + (16 x 16 x hundreds digit value) + (16 x tens digit value) + (ones digit value)
HDMI data check sum.	
Main Micon check Version.	
EEPROM check Version.	
Parameter check Picture Quality.	
Parameter check Picture Size.	
DTV : CA9DI18021	
EEPROM : K57R01HM00	
QUALITY : @@@@.@@ (@@@@.@@@ @@.@@:@@)	
SCALING : @@@@.@@ (@@@@.@@@ @@.@@:@@)	

FIG. 1

### CONFIRMATION OF INITIAL DATA

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the ALL mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button (6) on the remote control for more than 2 seconds.  
ADDRESS and DATA should appear as FIG 2.

NOTE: No need to set data other position than 0200~0F79.

ADDRESS	DATA
INIT : 0001	008E
DTV : CA9DI18021	
EEPROM : K57R01HM00	

FIG. 2

4. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press LEFT/RIGHT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing LEFT/RIGHT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 6 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

**After the data input, set to the initializing of shipping.**

10. Turn on the Power.
11. Set the VOLUME to minimum.
12. Press both VOL. DOWN button on the set and Channel button (1) on the remote control for more than 2 seconds.
13. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

# ELECTRICAL ADJUSTMENTS

## 1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

### CAUTION

- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease (**YG6260M**) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

**Prepare the following measurement tools for electrical adjustments.**

1. Pattern Generator

### On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button (9) on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 1-1**.

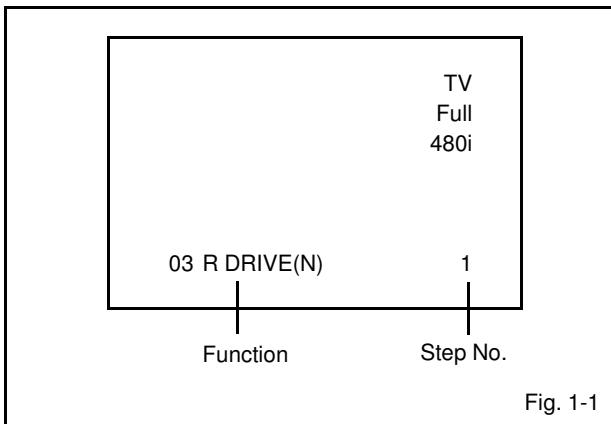


Fig. 1-1

3. Use the UP/DOWN button or Channel button (0-9) on the remote control to select the options shown in **Fig. 1-2**.
4. Press the SETUP/TV MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for TV, AV, COMPONENT, HDMI, PC and DVD mode, press the INPUT SELECT button on the remote control.
6. Receive the DIGITAL broadcasting.
7. To display the adjustment screen for DTV mode, select the digital channel.
8. Press the VOL.DOWN button on the set and the channel (9) on the remote control for more than 2 seconds.

NO. FUNCTION	NO. FUNCTION
03 R DRIVE (N)	35 TINT
04 R CUTOFF (N)	36 SHARP H1 MAX
05 G DRIVE (N)	37 SHARP H1 MIN
06 G CUTOFF (N)	38 SHARP H2 MAX
07 B DRIVE (N)	39 SHARP H2 MIN
08 B CUTOFF (N)	40 SHARP H3 MAX
09 R DRIVE (C)	41 SHARP H3 MIN
10 R CUTOFF (C)	42 SHARP H4 MAX
11 G DRIVE (C)	43 SHARP H4 MIN
12 G CUTOFF (C)	44 SHARP H5 MAX
13 B DRIVE (C)	45 SHARP H5 MIN
14 B CUTOFF (C)	46 SHARP V1 MAX
15 R DRIVE (W)	47 SHARP V1 MIN
16 R CUTOFF (W)	48 SHARP V2 MAX
17 G DRIVE (W)	49 SHARP V2 MIN
18 G CUTOFF (W)	50 CONTRAST CENTER
19 B DRIVE (W)	51 CONTRAST MAX
20 B CUTOFF (W)	52 CONTRAST MIN
29 BAK LIGHT CENT	53 COLOR CENTER
30 BAK LIGHT MAX	54 COLOR MAX
31 BAK LIGHT MIN	55 COLOR MIN
32 BRIGHTNESS CENT	58 CONTRAST 40
33 BRIGHTNESS MAX	
34 BRIGHTNESS MIN	

Fig. 1-2

## 2. BASIC ADJUSTMENTS

### 2-1: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the INPUT SELECT button on the remote control to set to the AV mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (03) on the remote control to select "R DRIVE (N)".
6. Press the UP/DOWN button on the remote control to select the "R CUTOFF (N)", "B DRIVE (N)", "B CUTOFF (N)", "R DRIVE (C)", "R CUTOFF (C)", "B DRIVE (C)", "B CUTOFF (C)", "R DRIVE (W)", "R CUTOFF (W)", "B DRIVE (W)" or "B CUTOFF (W)".
7. Adjust the LEFT/RIGHT button on the remote control to whiten the R DRIVE (N), R CUTOFF (N), B DRIVE (N), B CUTOFF (N), R DRIVE (C), R CUTOFF (C), B DRIVE (C), B CUTOFF (C), R DRIVE (W), R CUTOFF (W), B DRIVE (W) and B CUTOFF (W) at each step tone sections equally.
8. Perform the above adjustments 6 and 7 until the white color is achieved.

## ELECTRICAL ADJUSTMENTS

### 2-2: BRIGHTNESS CENT

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the color bar pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (32) on the remote control to select "BRIGHTNESS CENT".
5. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "126".
6. Check if the picture is normal.
7. Receive the color bar pattern. (VIDEO Input)
8. Using the remote control, set the brightness and contrast to normal position.
9. Press the INPUT SELECT button on the remote control to set to the AV mode.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (32) on the remote control to select "BRIGHTNESS CENT".
11. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "126".
12. Check if the picture is normal.
13. Receive the color bar pattern. (COMPONENT Input)
14. Using the remote control, set the brightness and contrast to normal position.
15. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
16. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (32) on the remote control to select "BRIGHTNESS CENT".
17. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "126".
18. Check if the picture is normal.
19. Receive the color bar pattern. (HDMI Input)
20. Using the remote control, set the brightness and contrast to normal position.
21. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
22. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (32) on the remote control to select "BRIGHTNESS CENT".
23. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "134".
24. Check if the picture is normal.
25. Playback the DVD(480i) disc.  
Press the INPUT SELECT button on the remote control to set to the DVD mode.
26. Using the remote control, set the brightness and contrast to normal position.
27. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (32) on the remote control to select "BRIGHTNESS CENT".
28. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "126".
29. Check if the picture is normal.

### 2-3: CONTRAST MAX

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the color bar pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (51) on the remote control to select "CONTRAST MAX".
5. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "187".
6. Check if the picture is normal.
7. Receive the color bar pattern. (VIDEO Input)
8. Using the remote control, set the brightness and contrast to normal position.
9. Press the INPUT SELECT button on the remote control to set to the AV mode.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (51) on the remote control to select "CONTRAST MAX".
11. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "141".
12. Check if the picture is normal.
13. Receive the color bar pattern. (COMPONENT Input)
14. Using the remote control, set the brightness and contrast to normal position.
15. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
16. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (51) on the remote control to select "CONTRAST MAX".
17. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "153".
18. Check if the picture is normal.
19. Receive the color bar pattern. (HDMI Input)
20. Using the remote control, set the brightness and contrast to normal position.
21. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
22. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (51) on the remote control to select "CONTRAST MAX".
23. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "150".
24. Check if the picture is normal.
25. Playback the DVD(480i) disc.  
Press the INPUT SELECT button on the remote control to set to the DVD mode.
26. Using the remote control, set the brightness and contrast to normal position.
27. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (51) on the remote control to select "CONTRAST MAX".
28. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "141".
29. Check if the picture is normal.

## ELECTRICAL ADJUSTMENTS

### 2-4: CONTRAST CENTER

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the color bar pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (50) on the remote control to select "CONTRAST CENTER".
5. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "144".
6. Check if the picture is normal.
7. Receive the color bar pattern. (VIDEO Input)
8. Using the remote control, set the brightness and contrast to normal position.
9. Press the INPUT SELECT button on the remote control to set to the AV mode.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (50) on the remote control to select "CONTRAST CENTER".
11. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "108".
12. Check if the picture is normal.
13. Receive the color bar pattern. (COMPONENT Input)
14. Using the remote control, set the brightness and contrast to normal position.
15. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
16. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (50) on the remote control to select "CONTRAST CENTER".
17. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "118".
18. Check if the picture is normal.
19. Receive the color bar pattern. (HDMI Input)
20. Using the remote control, set the brightness and contrast to normal position.
21. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
22. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (50) on the remote control to select "CONTRAST CENTER".
23. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "114".
24. Check if the picture is normal.
25. Playback the DVD(480i) disc.  
Press the INPUT SELECT button on the remote control to set to the DVD mode.
26. Using the remote control, set the brightness and contrast to normal position.
27. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (50) on the remote control to select "CONTRAST CENTER".
28. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "108".
29. Check if the picture is normal.

### 2-5: CONTRAST 40

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the color bar pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (58) on the remote control to select "CONTRAST 40".
5. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "173".
6. Check if the picture is normal.
7. Receive the color bar pattern. (VIDEO Input)
8. Using the remote control, set the brightness and contrast to normal position.
9. Press the INPUT SELECT button on the remote control to set to the AV mode.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (58) on the remote control to select "CONTRAST 40".
11. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "131".
12. Check if the picture is normal.
13. Receive the color bar pattern. (COMPONENT Input)
14. Using the remote control, set the brightness and contrast to normal position.
15. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
16. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (58) on the remote control to select "CONTRAST 40".
17. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "142".
18. Check if the picture is normal.
19. Receive the color bar pattern. (HDMI Input)
20. Using the remote control, set the brightness and contrast to normal position.
21. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
22. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (58) on the remote control to select "CONTRAST 40".
23. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "139".
24. Check if the picture is normal.
25. Playback the DVD(480i) disc.  
Press the INPUT SELECT button on the remote control to set to the DVD mode.
26. Using the remote control, set the brightness and contrast to normal position.
27. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (58) on the remote control to select "CONTRAST 40".
28. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "131".
29. Check if the picture is normal.

# ELECTRICAL ADJUSTMENTS

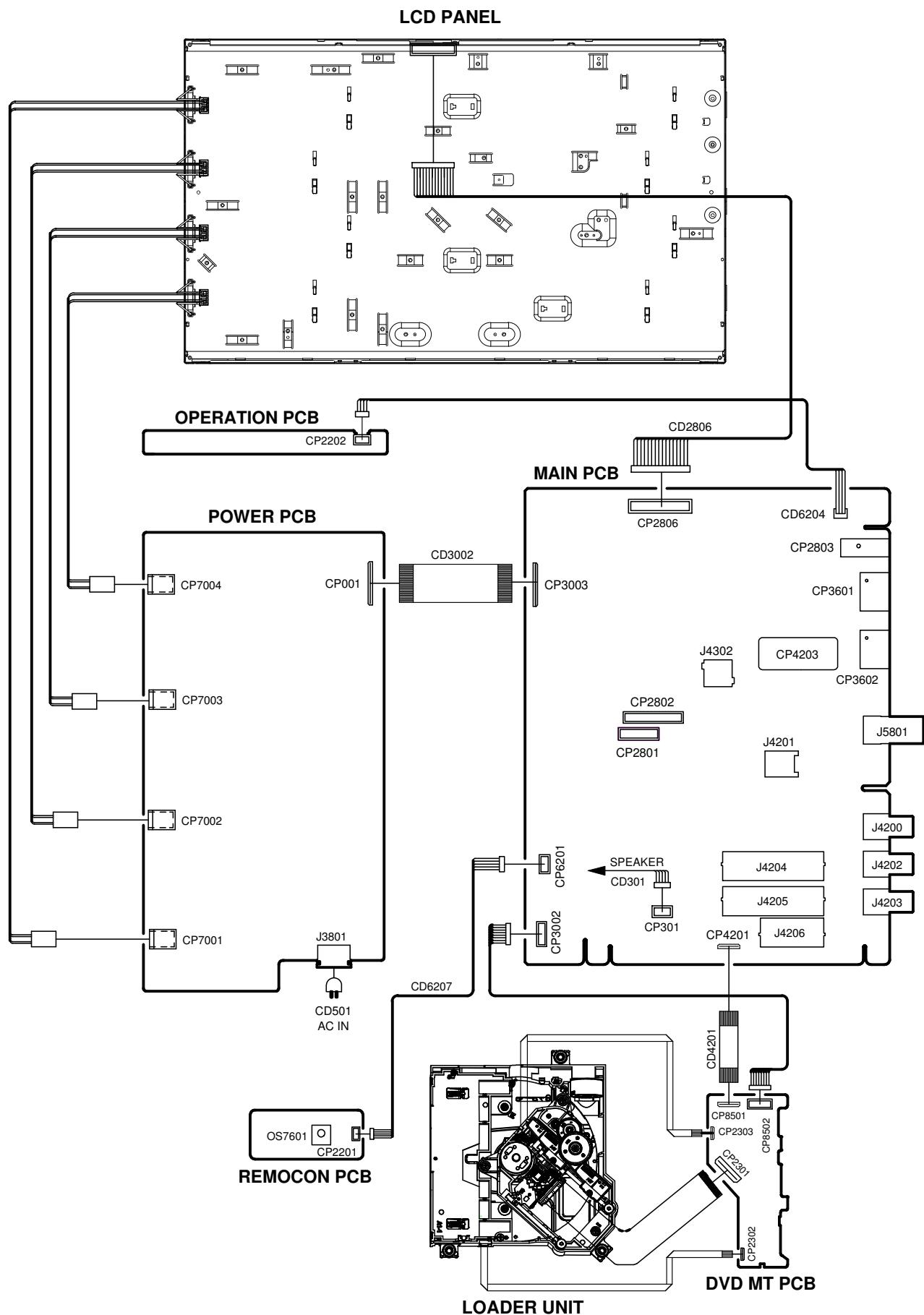
## 2-6: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each of the adjustment item is set correctly referring below. (TV/AV/COMPONENT/HDMI/PC/DVD/DTV)

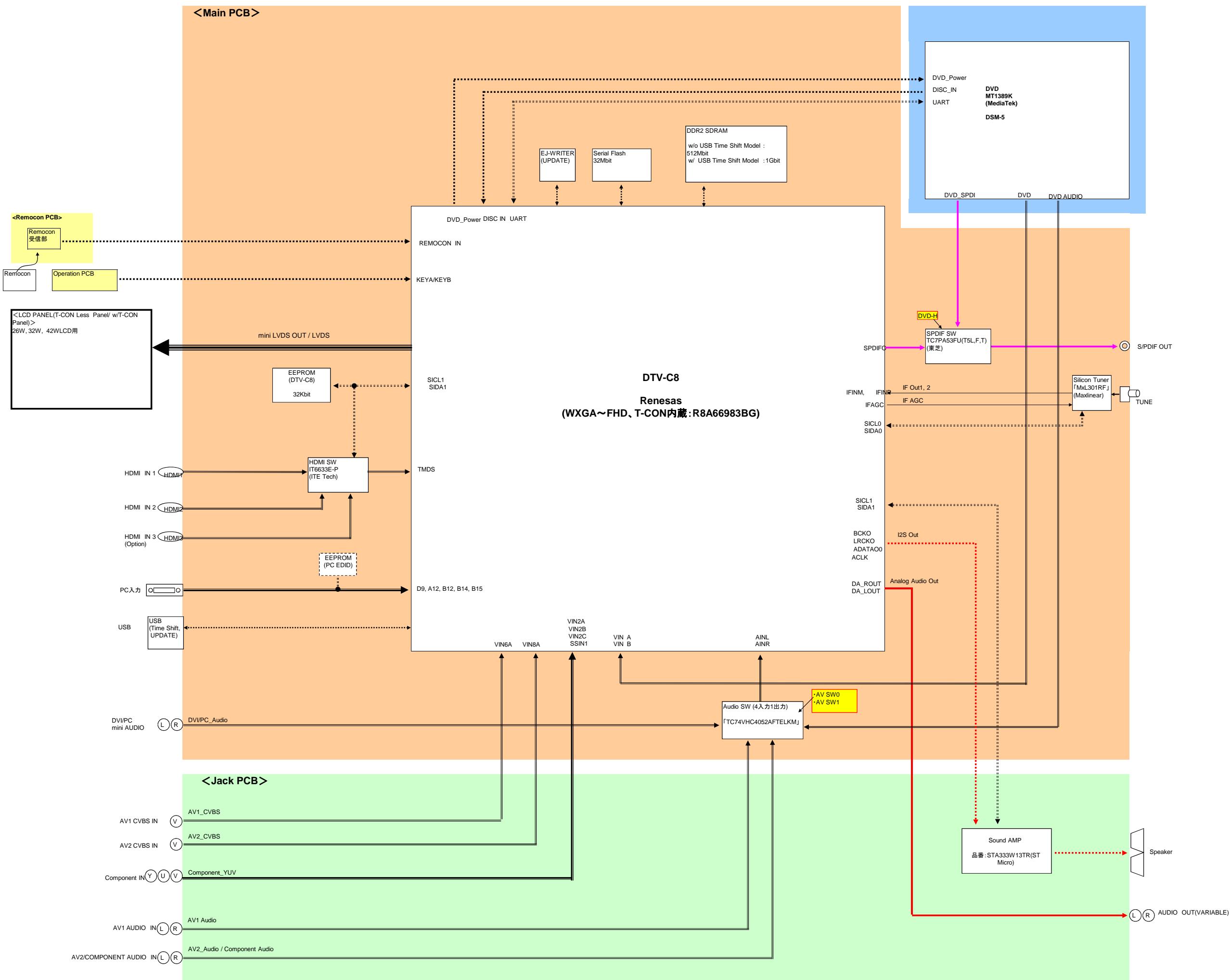
**NOTE:** For the step no. with \* mark, please adjust it according to the situation of the set.

# ELECTRICAL ADJUSTMENTS

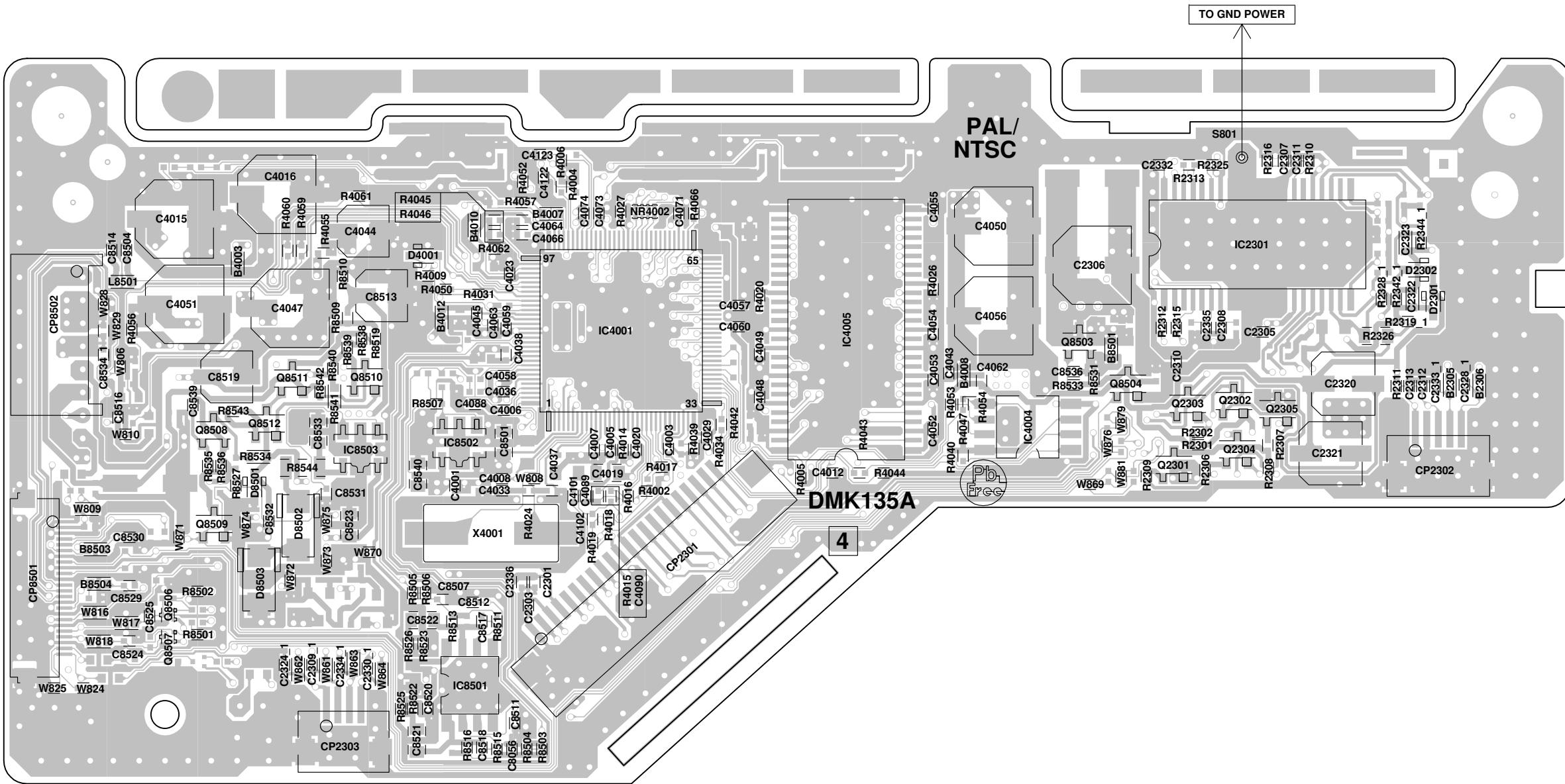
## 3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



# BLOCK DIAGRAM

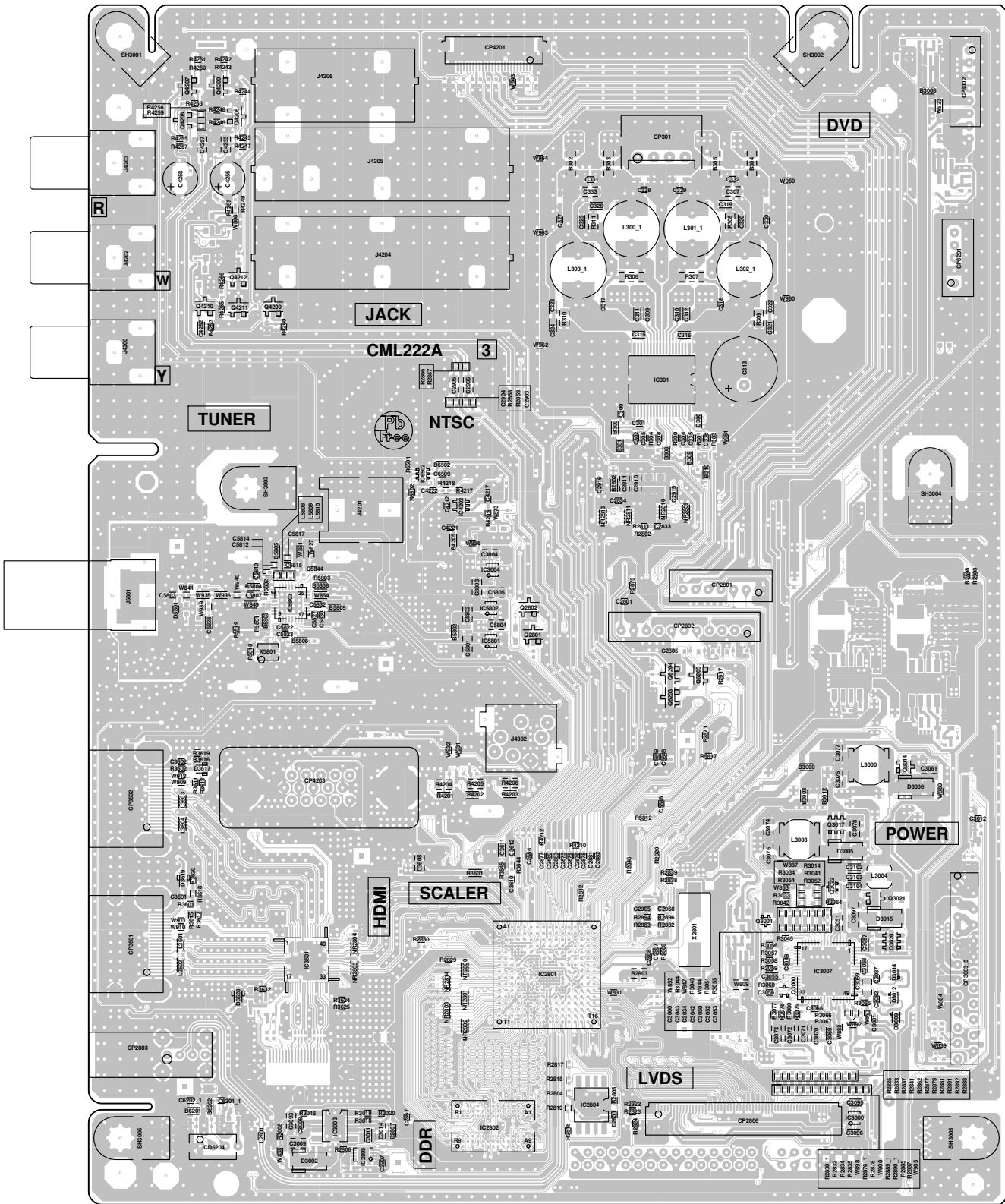


## **PRINTED CIRCUIT BOARDS DVD MT (TOP SIDE)**

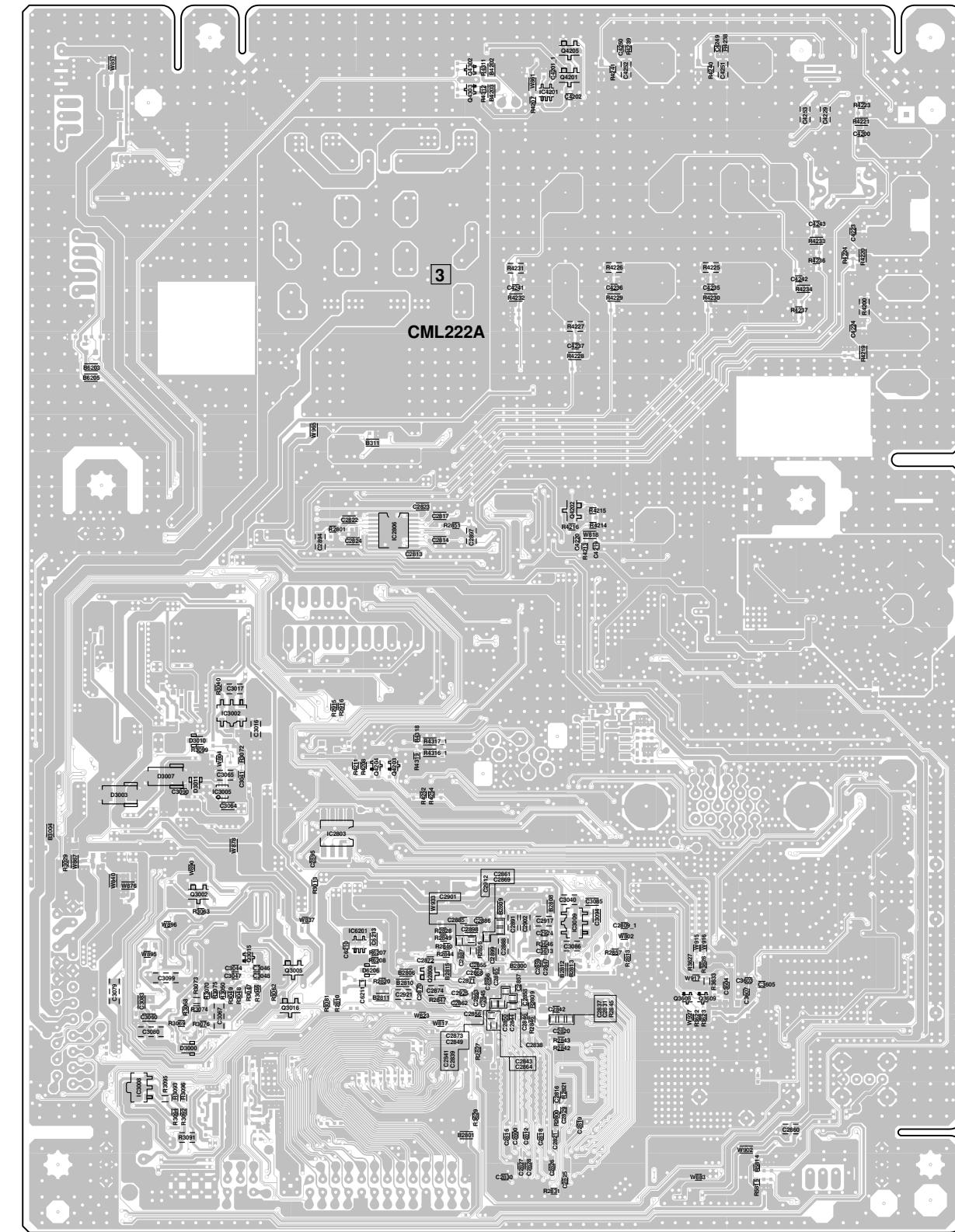


## PRINTED CIRCUIT BOARDS

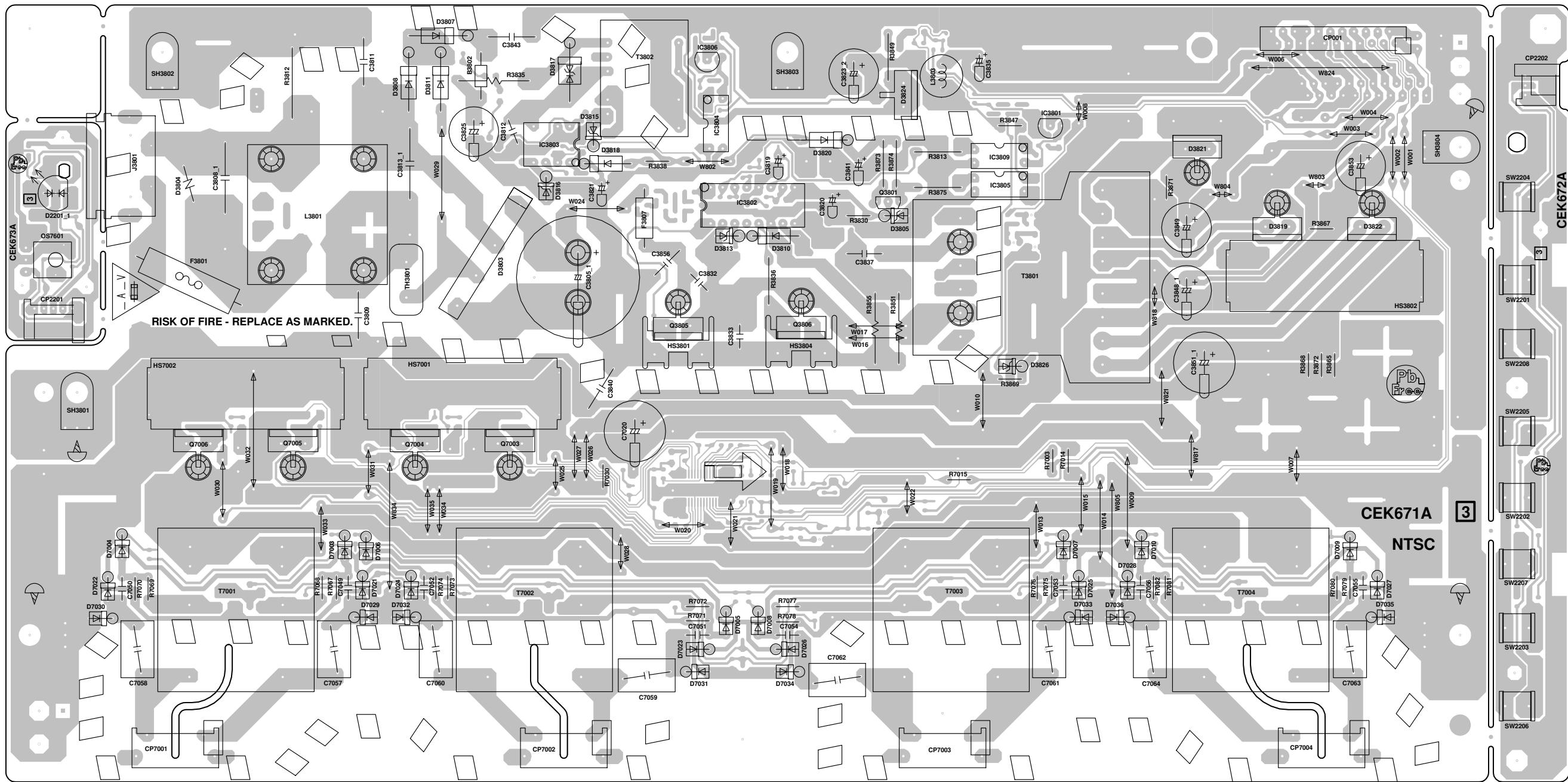
MAIN (TOP SIDE)



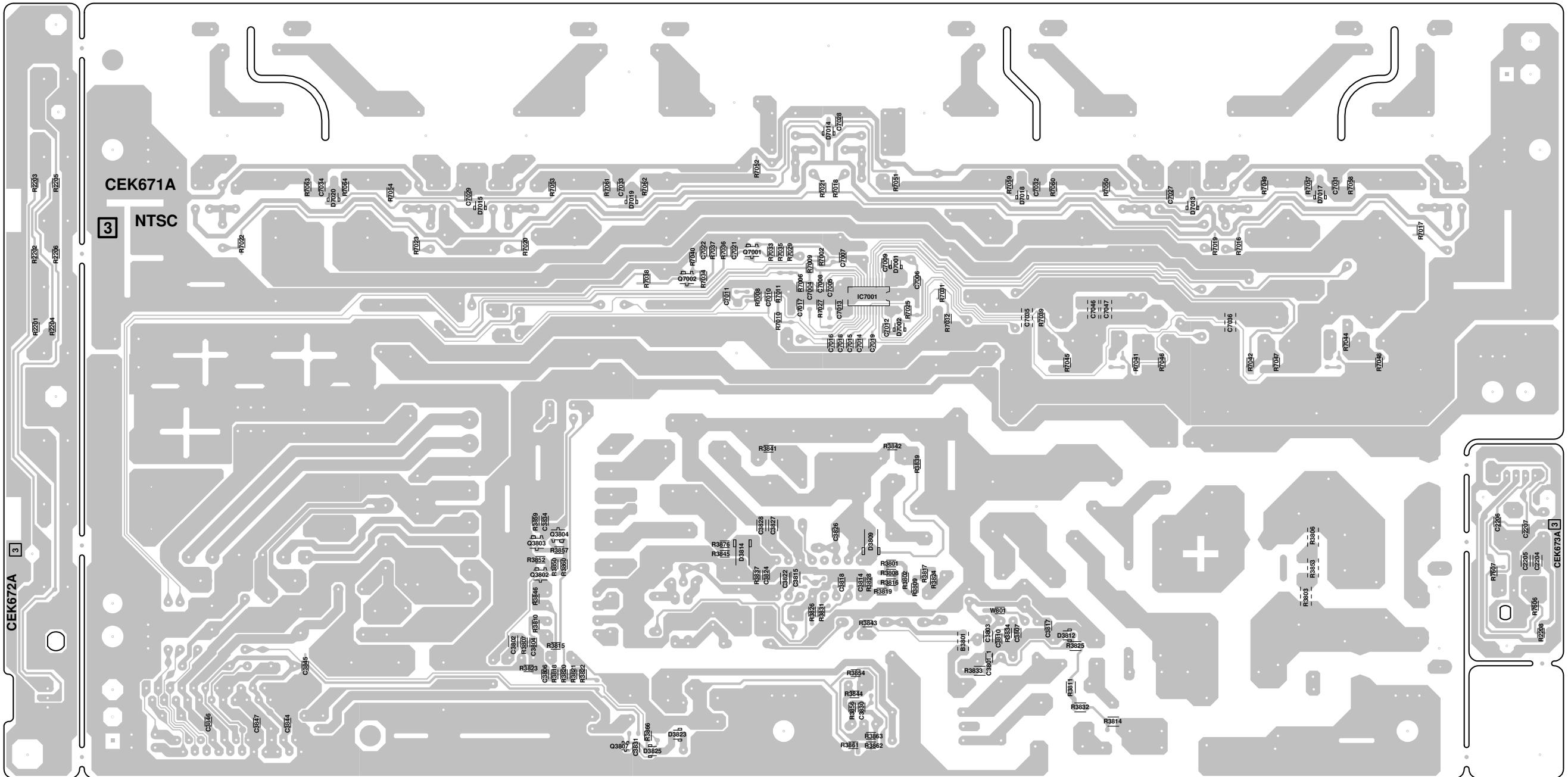
MAIN (BOTTOM SIDE)



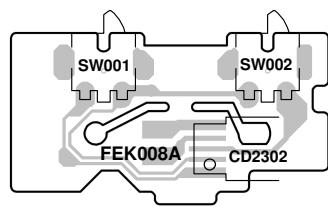
**PRINTED CIRCUIT BOARDS  
POWER/REMOCON/OPERATION (INSERTED PARTS)  
SOLDER SIDE**



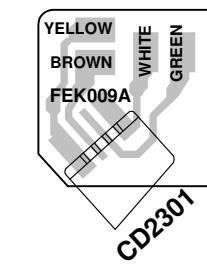
**PRINTED CIRCUIT BOARDS  
POWER/REMOCON/OPERATION (CHIP MOUNTED PARTS)  
SOLDER SIDE**



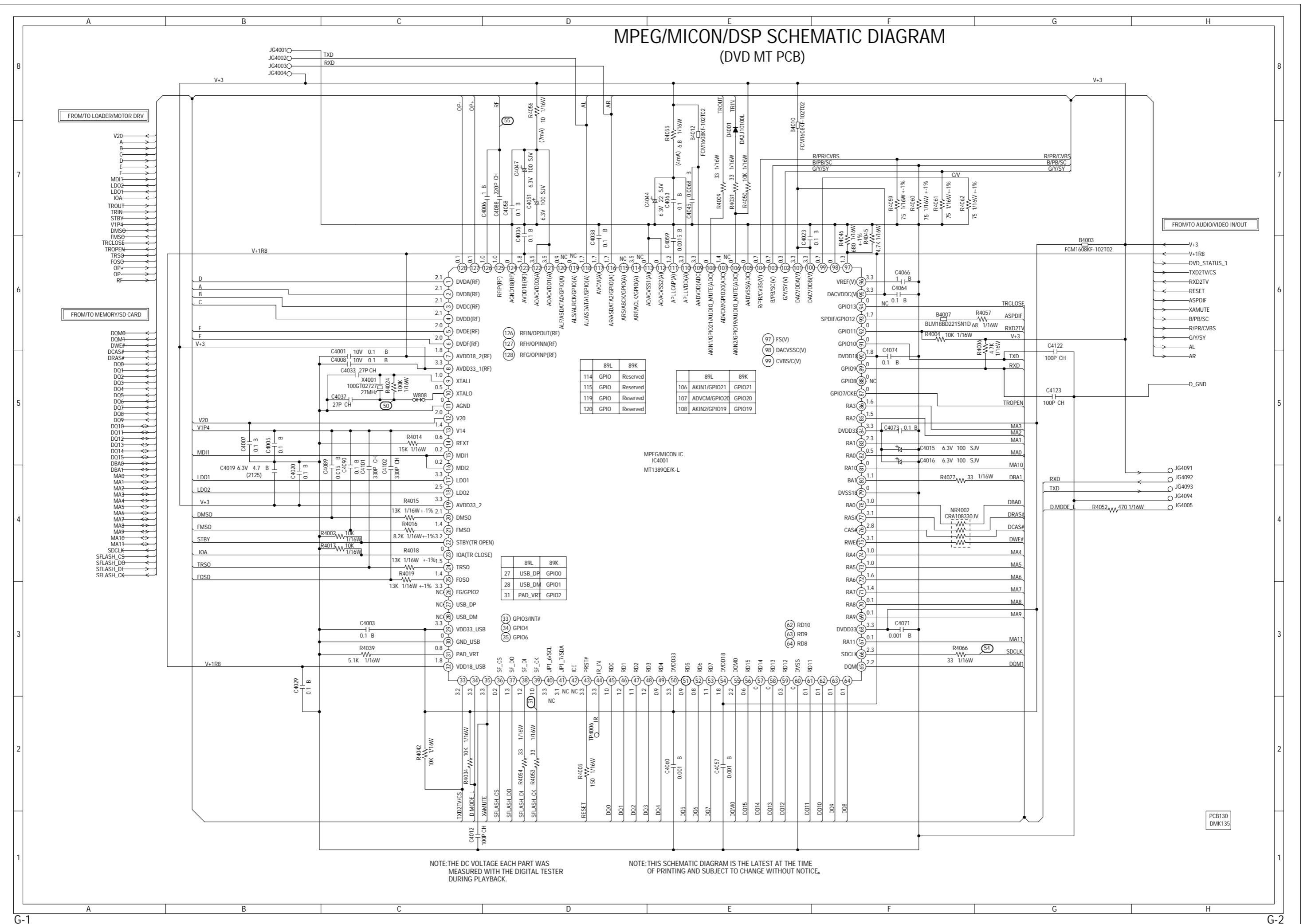
**LOADING MOTOR (CHIP MOUNTED PARTS)  
SOLDER SIDE**



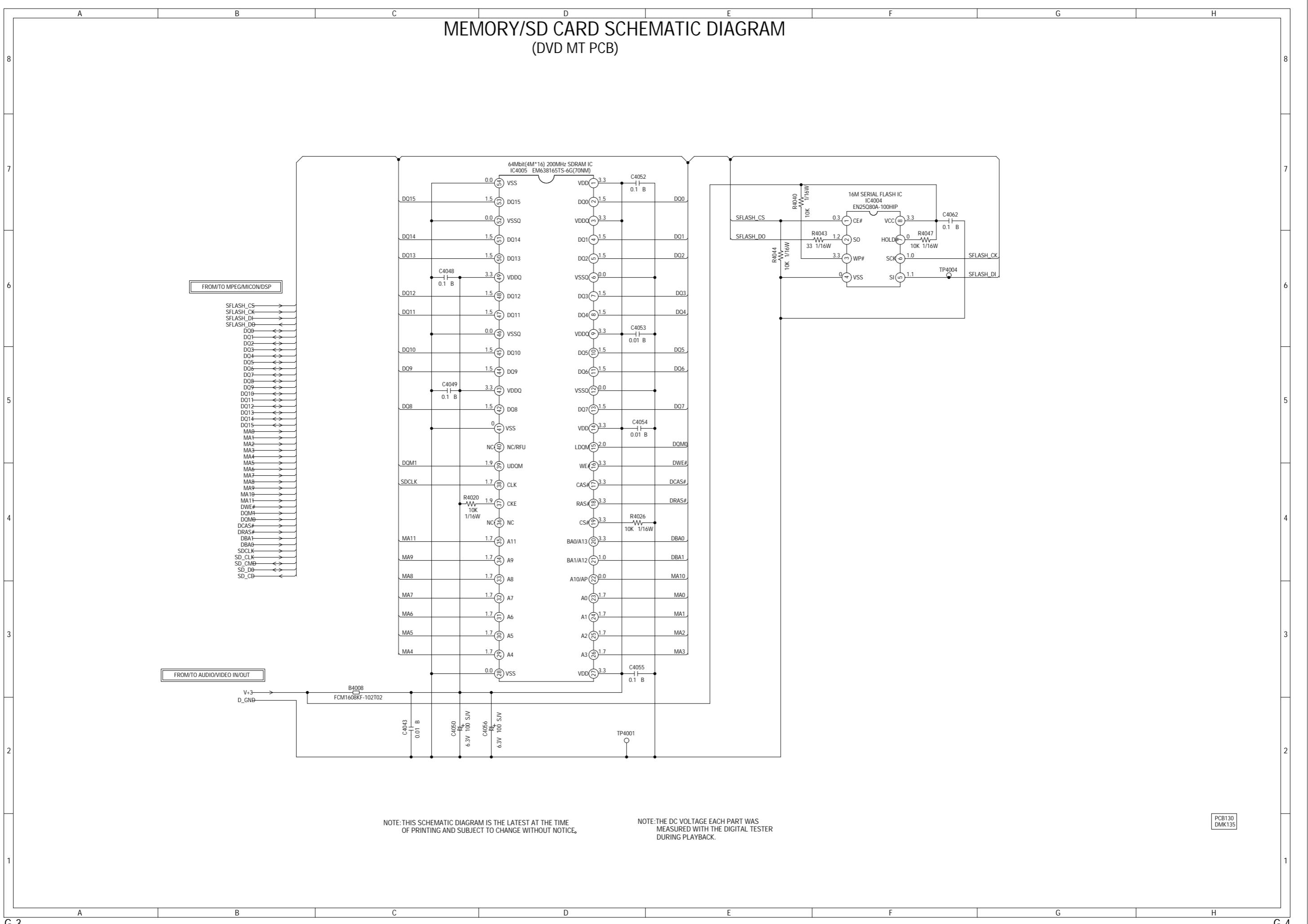
**PCB (CHIP MOUNTED PARTS)  
SOLDER SIDE**



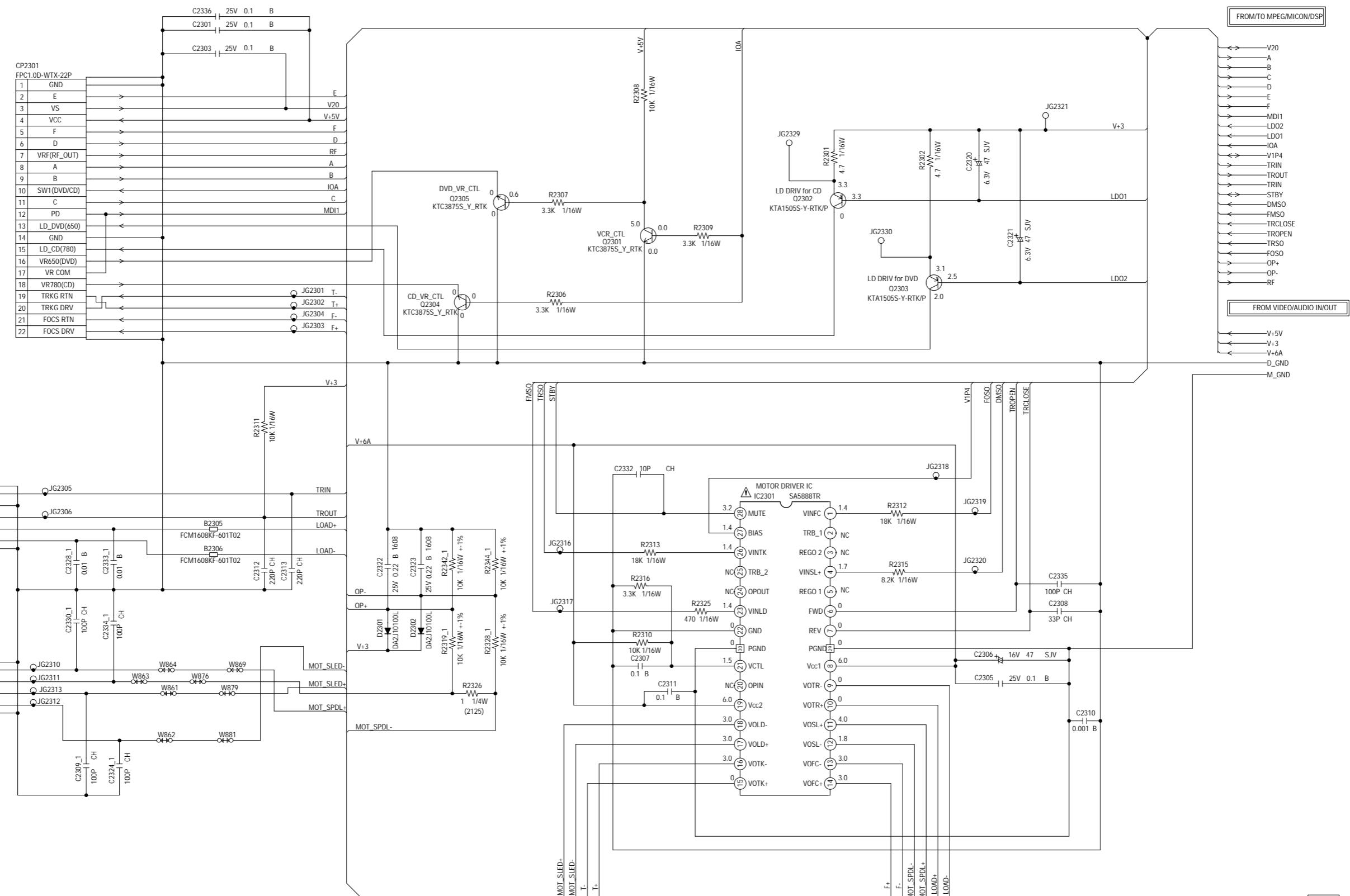
# MPEG/MICON/DSP SCHEMATIC DIAGRAM (DVD MT PCB)



**MEMORY/SD CARD SCHEMATIC DIAGRAM**  
**(DVD MT PCB)**



# LOADER/MOTOR DRV SCHEMATIC DIAGRAM (DVD MT PCB)



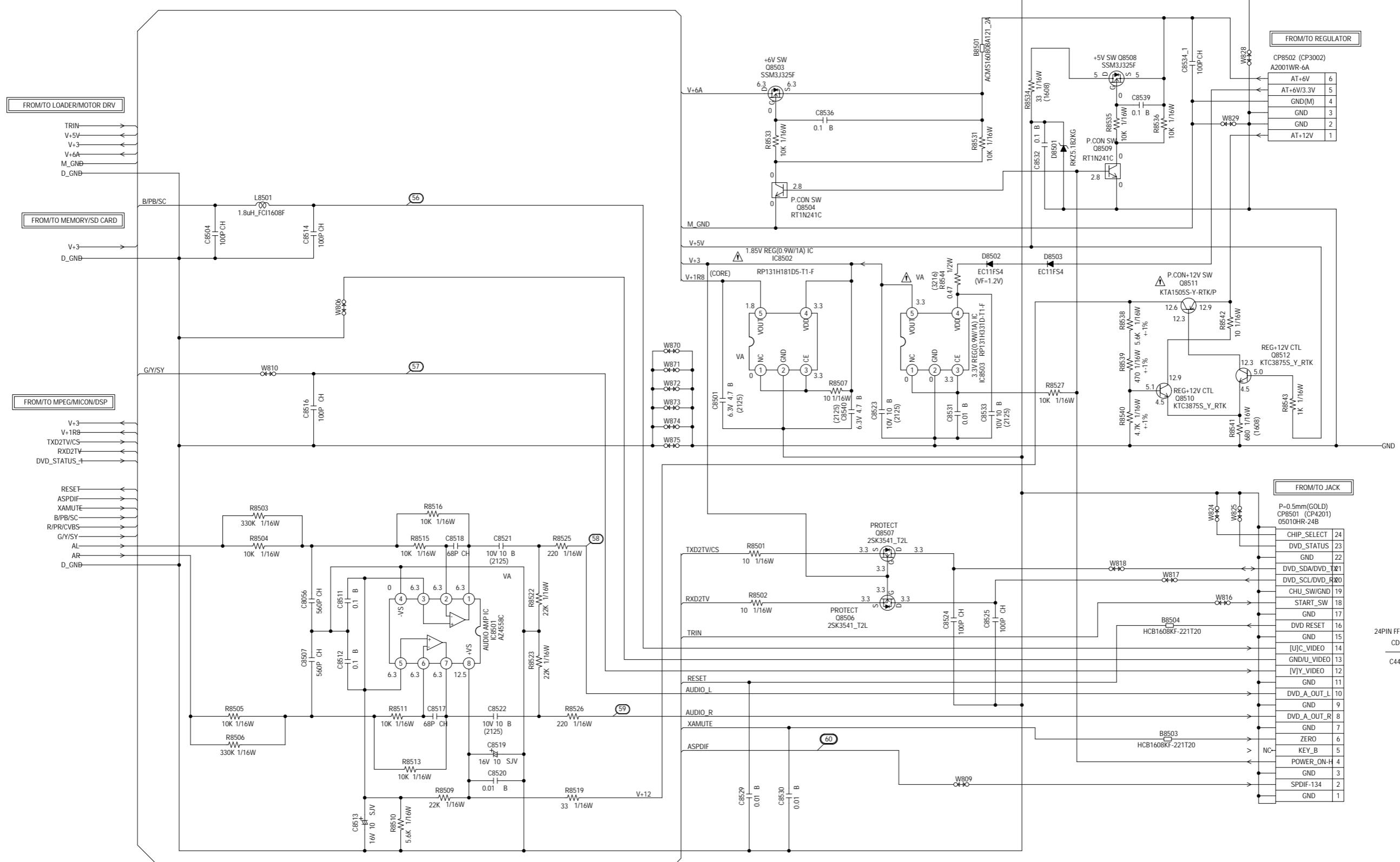
**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION** LES PIECES REPARÉES PAR UN ETANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

# VIDEO/AUDIO IN/OUT SCHEMATIC DIAGRAM (DVD MT PCB)

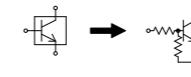


**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION**: LES PIECES REPARÉES PAR UN  ETANT DANGEREUSES EN POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

NOTE: THE DC VOLTAGE EACH PART WAS

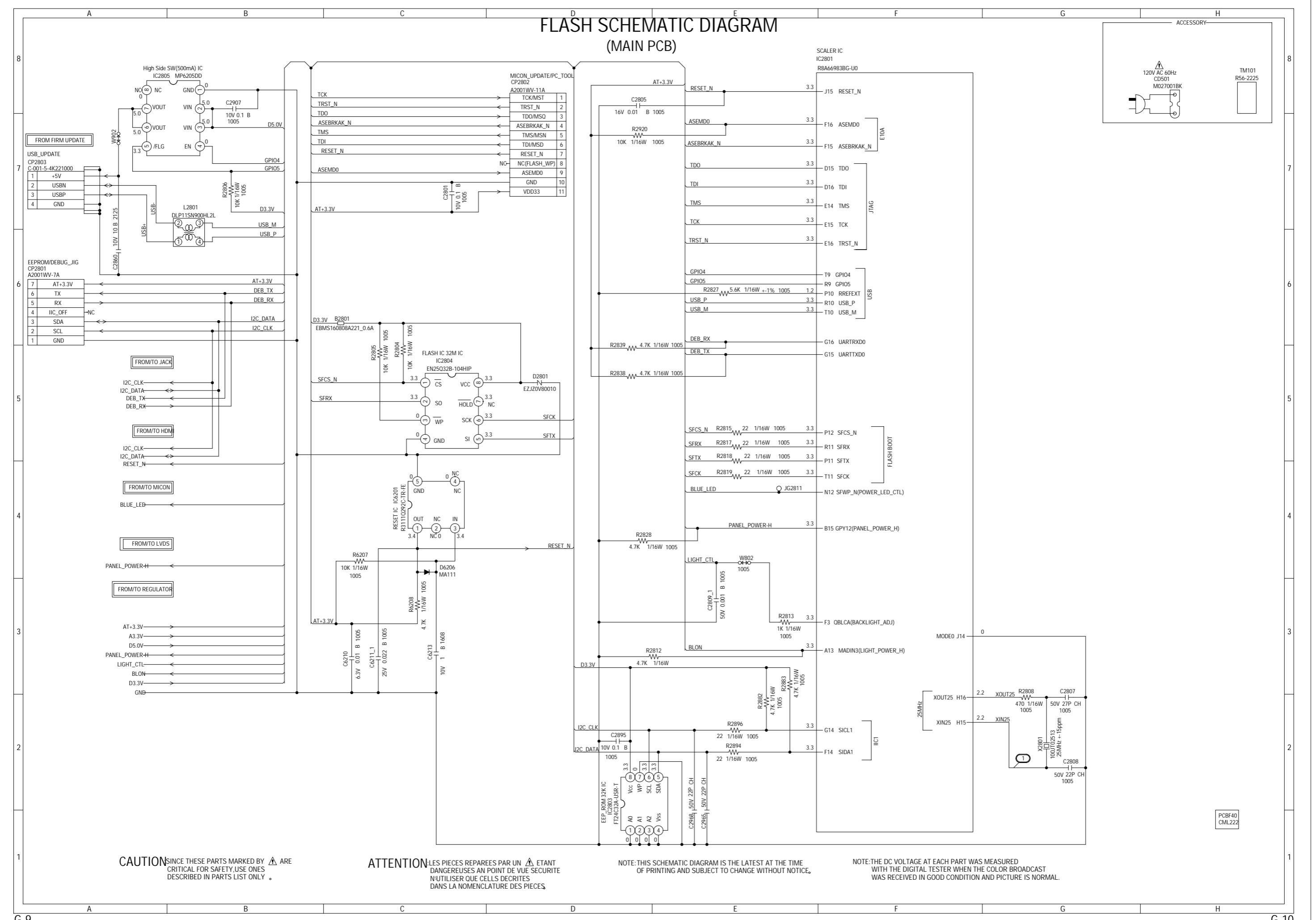
CAUTION: DIGITAL TRANSISTOR



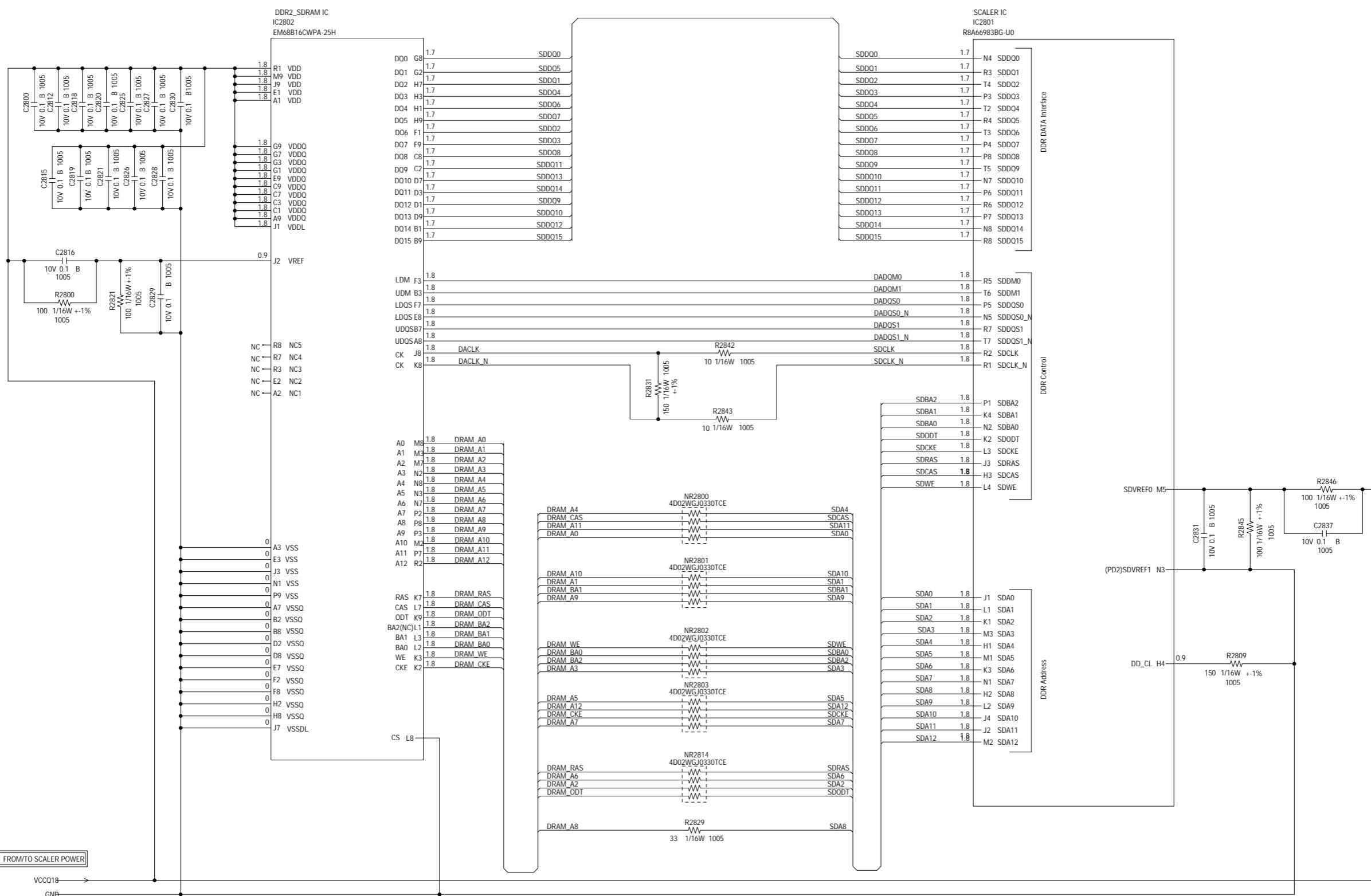
PCB130  
DMK135

# FLASH SCHEMATIC DIAGRAM

(MAIN PCB)



## DDR2 SCHEMATIC DIAGRAM (MAIN PCB)

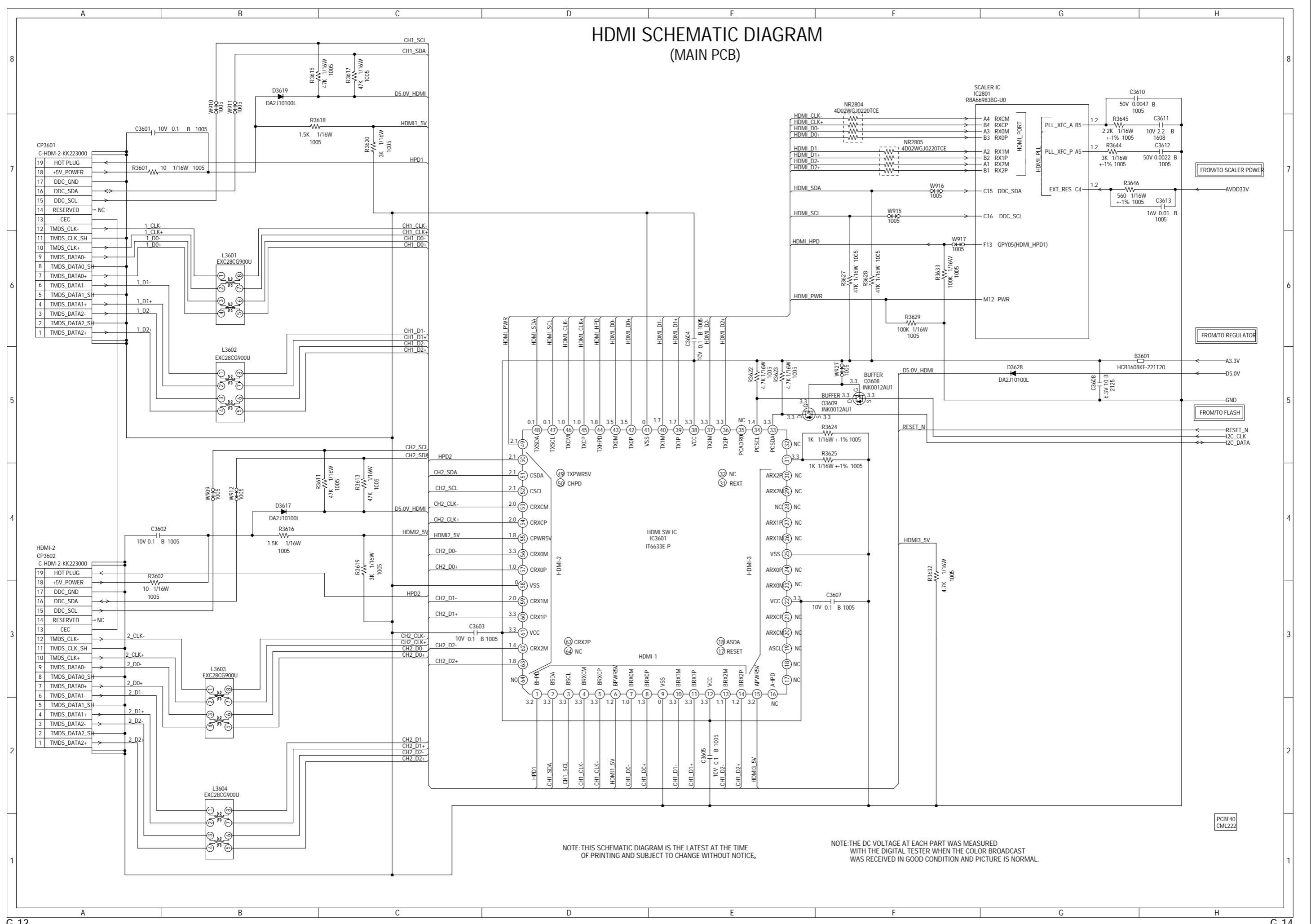


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

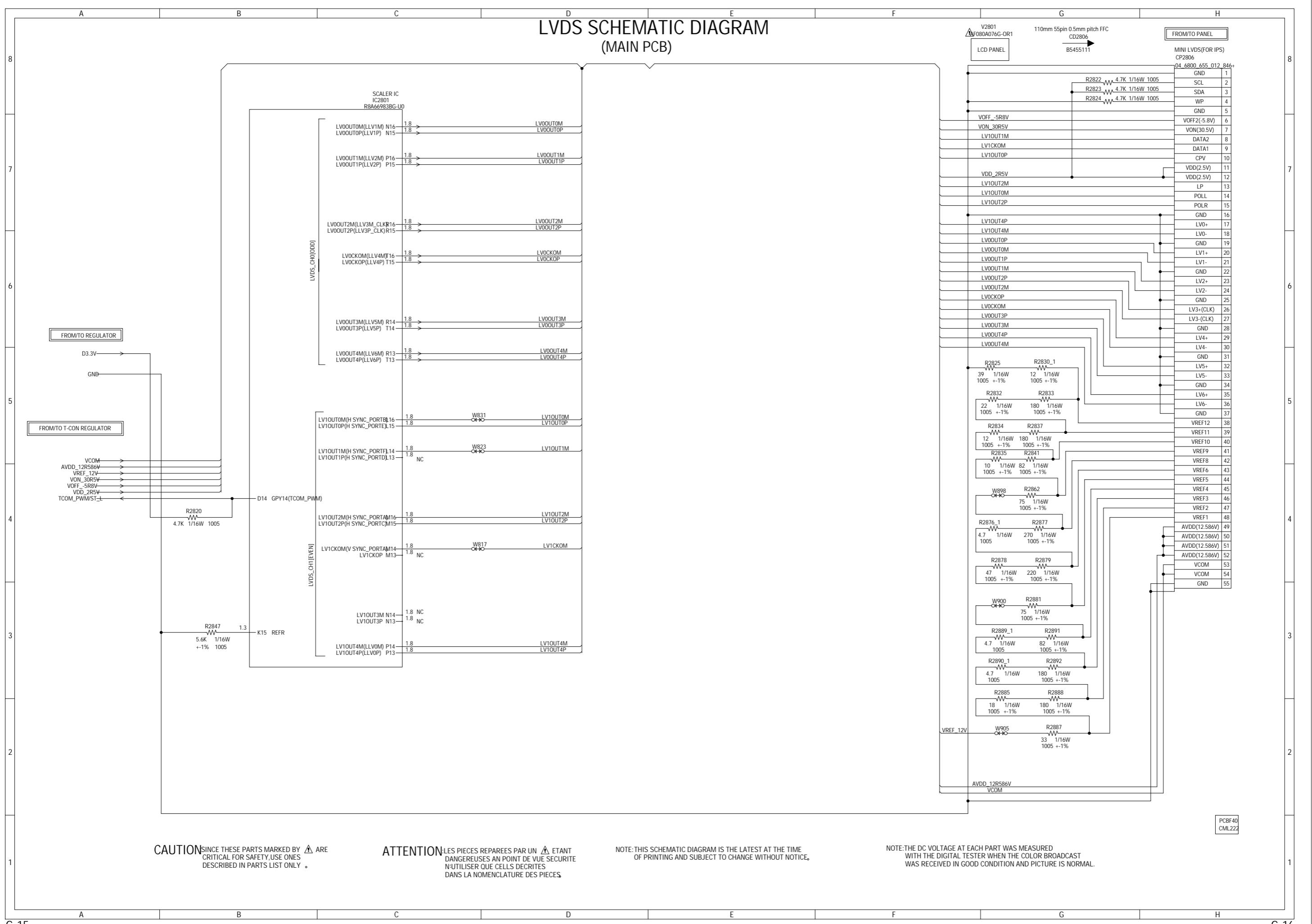
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL

PCBF40  
CML222

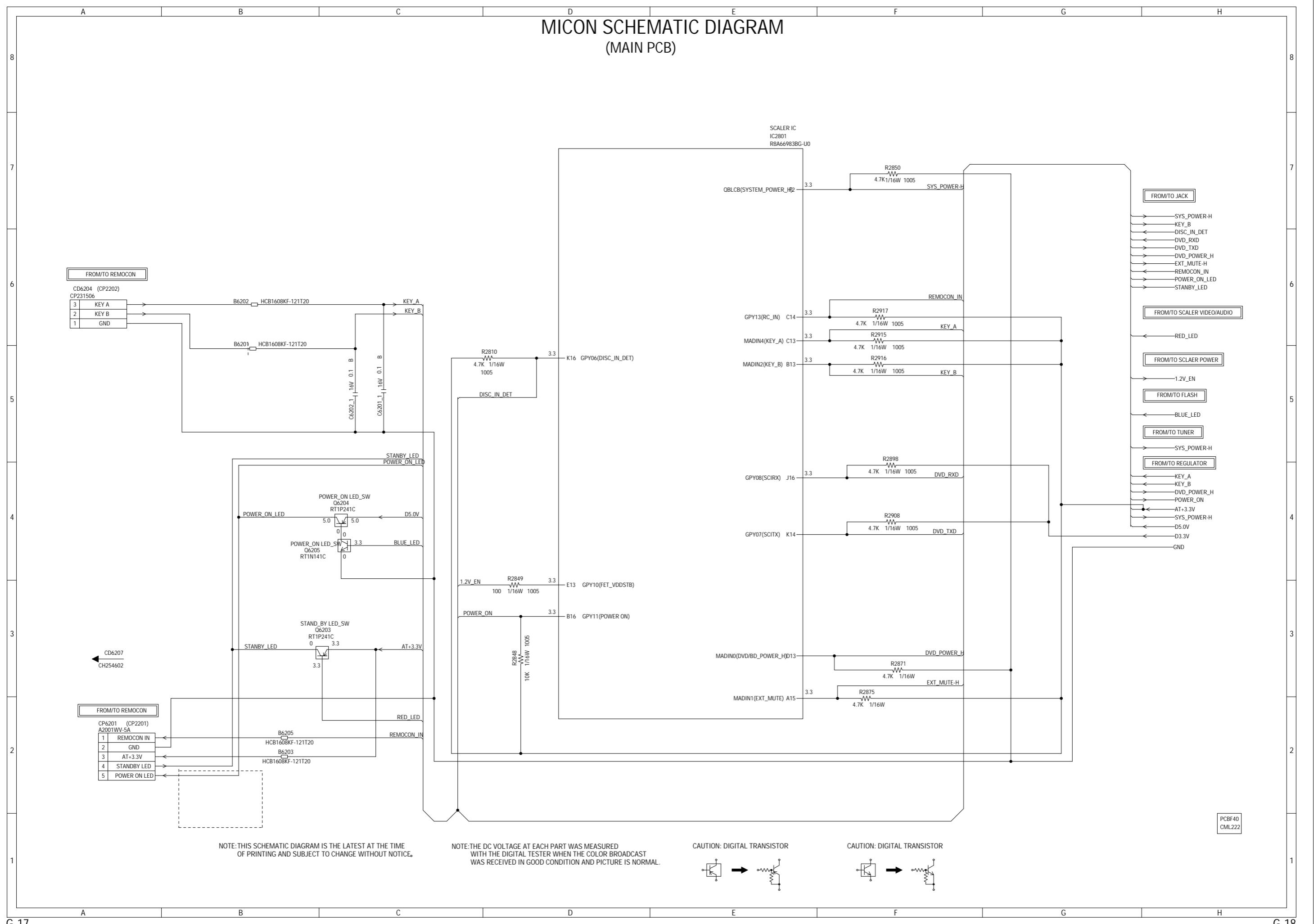
# HDMI SCHEMATIC DIAGRAM (MAIN PCB)



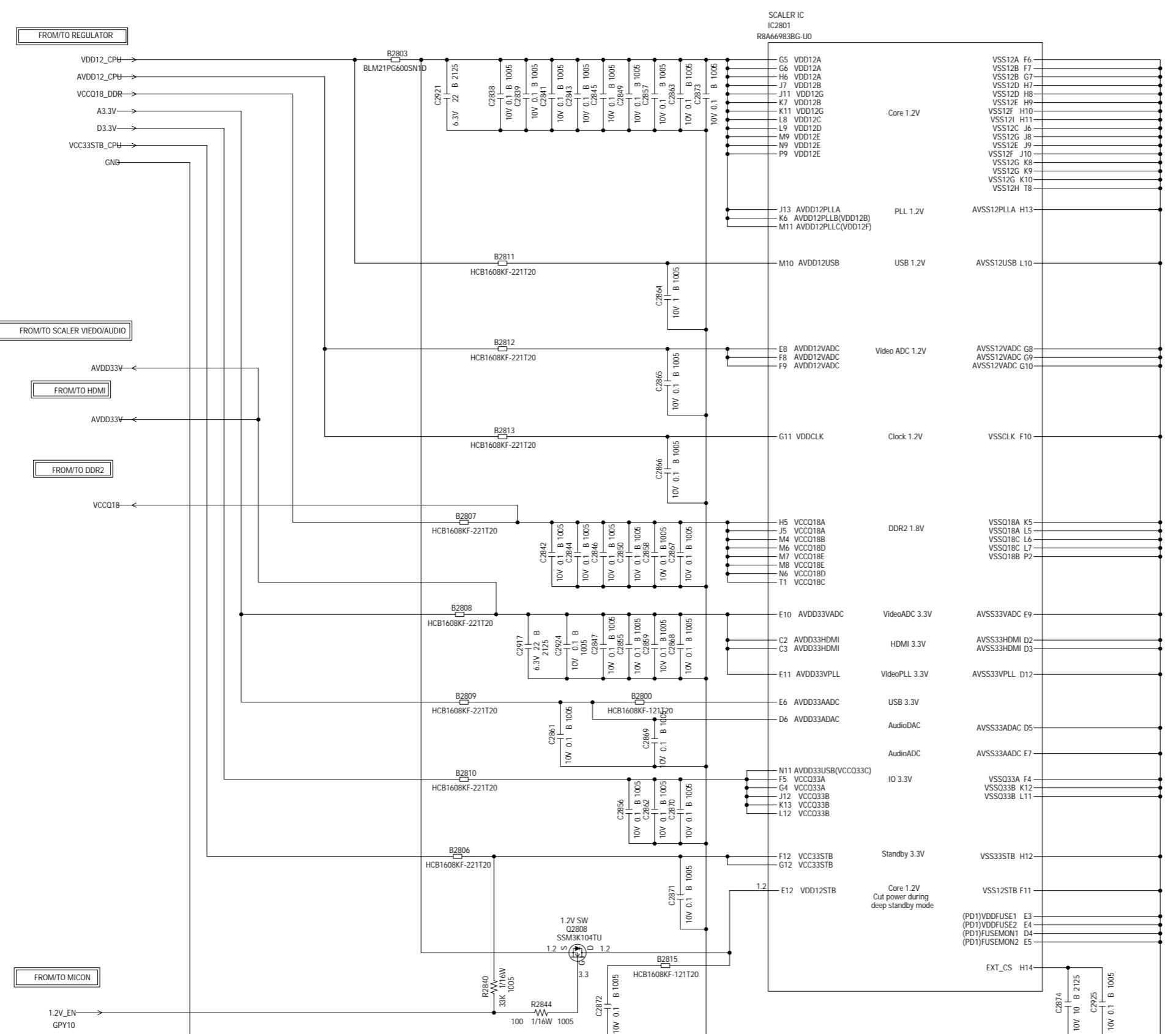
# LVDS SCHEMATIC DIAGRAM (MAIN PCB)



# MICON SCHEMATIC DIAGRAM (MAIN PCB)



# SCALER POWER SCHEMATIC DIAGRAM (MAIN PCB)



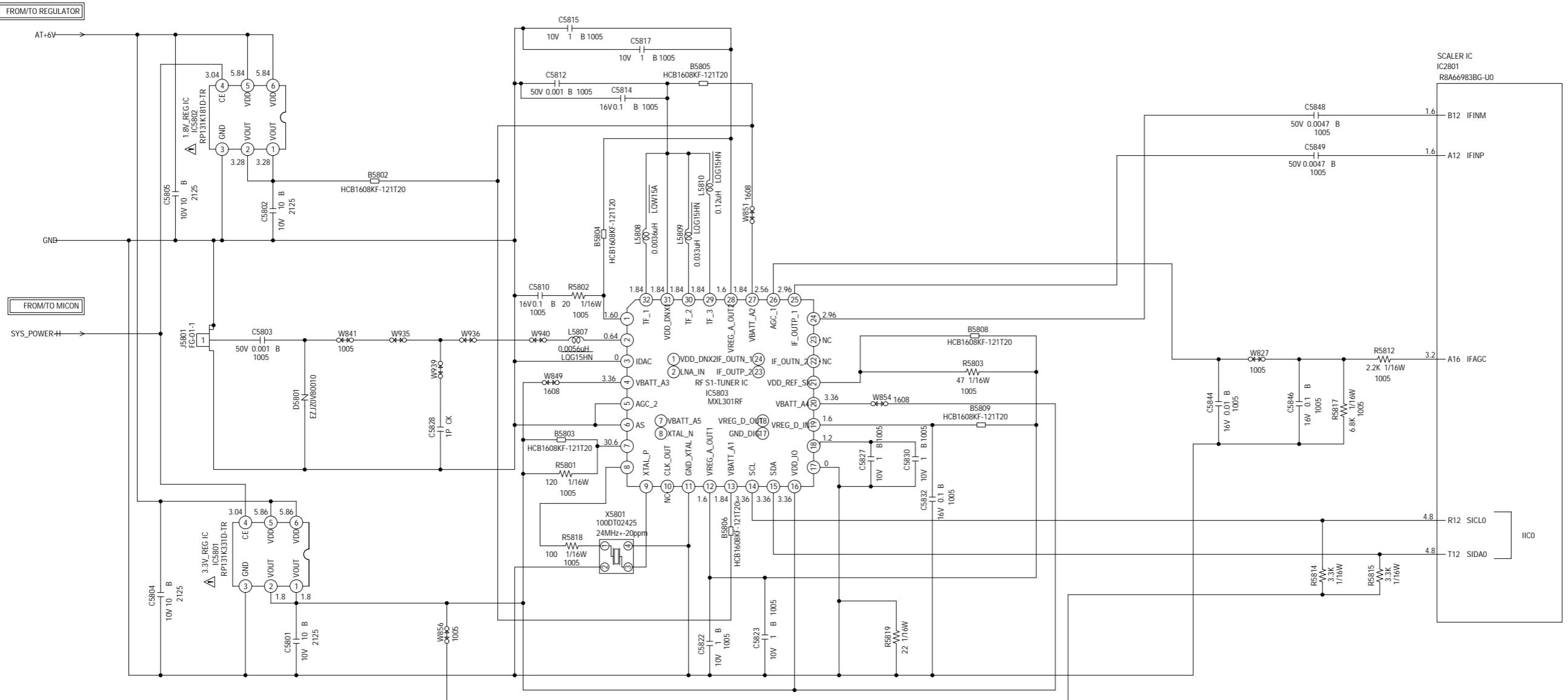
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

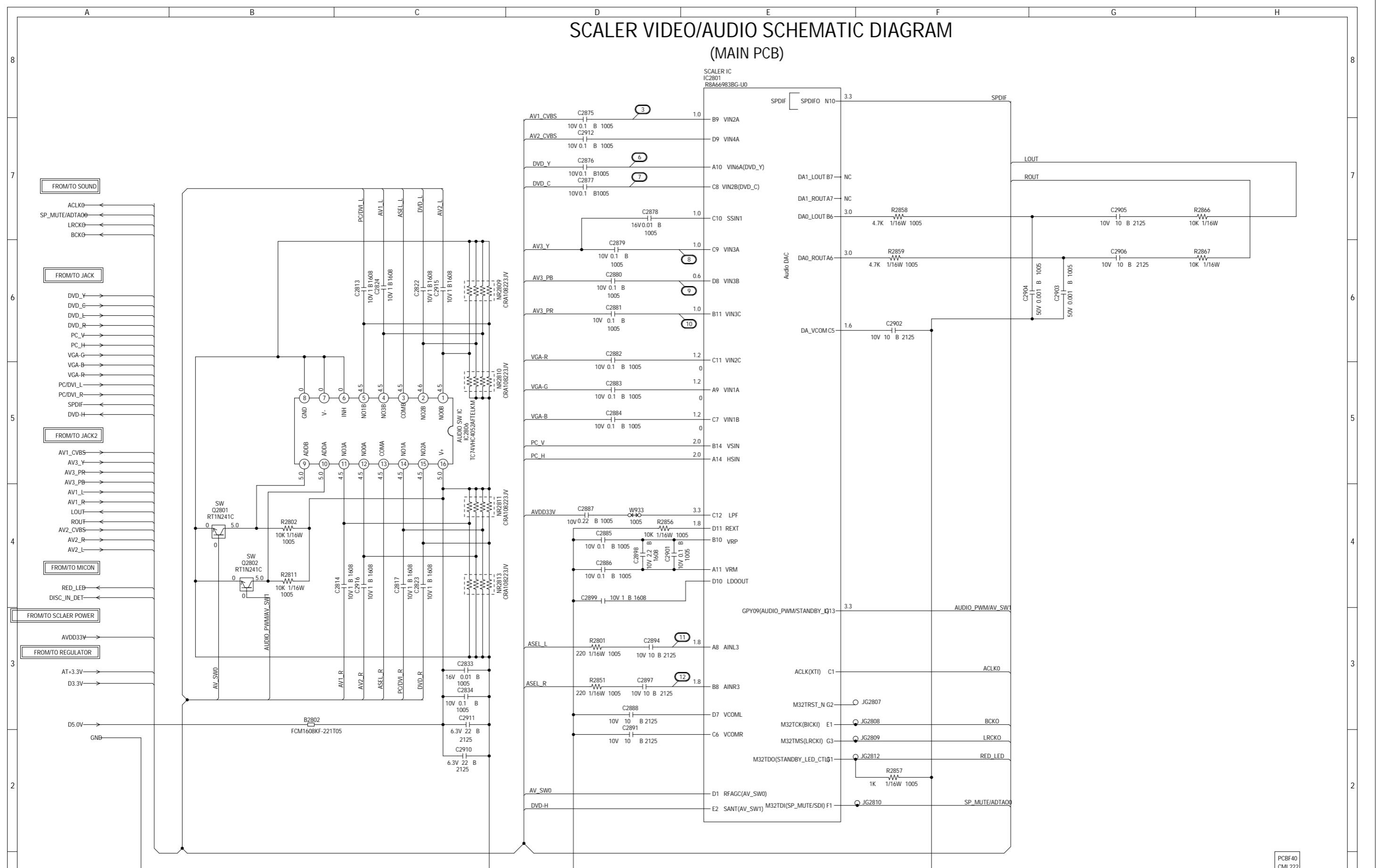
PCBF40  
CML222

# TUNER SCHEMATIC DIAGRAM

(MAIN PCB)



# SCALER VIDEO/AUDIO SCHEMATIC DIAGRAM (MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

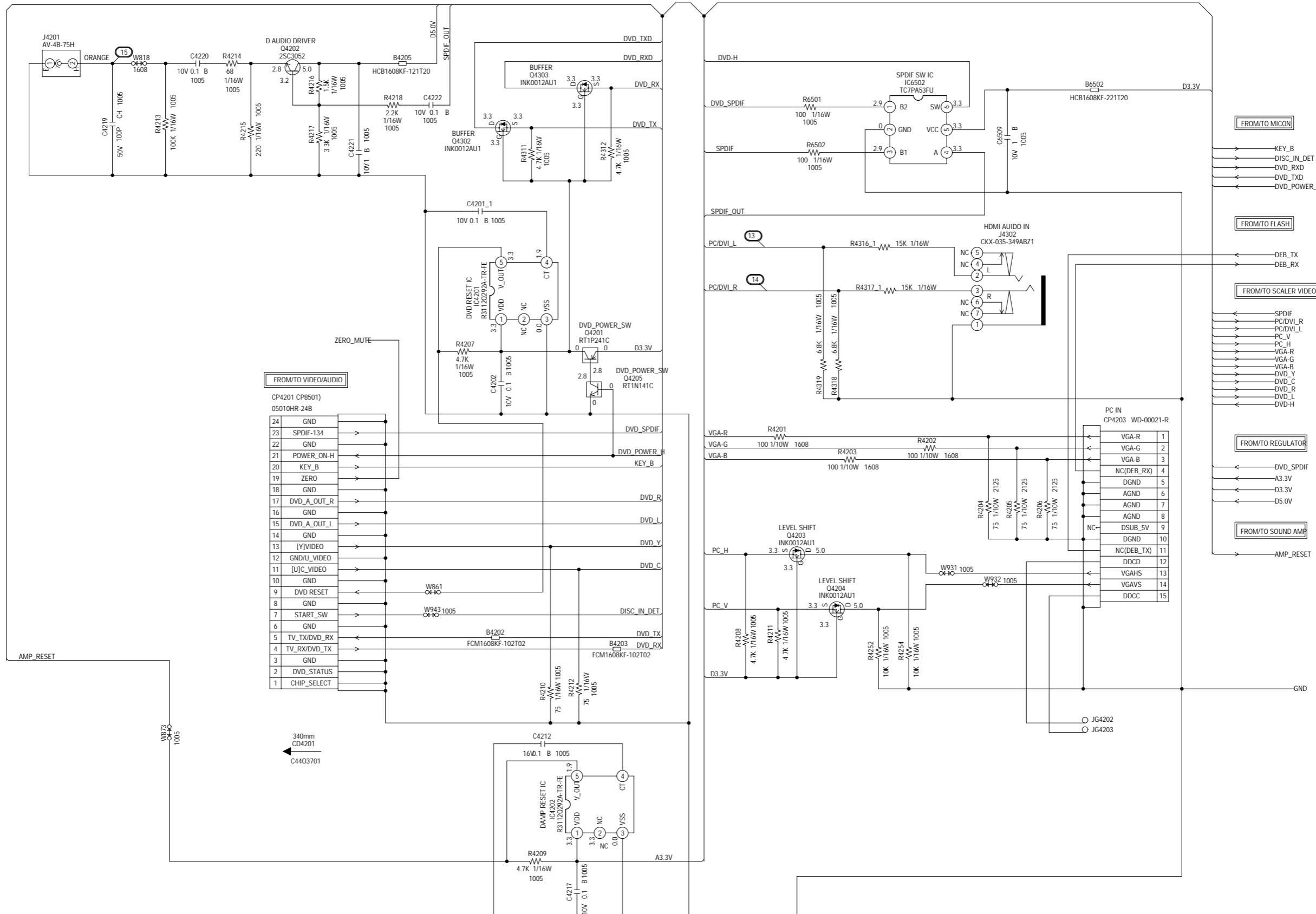
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR



# JACK SCHEMATIC DIAGRAM

(MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

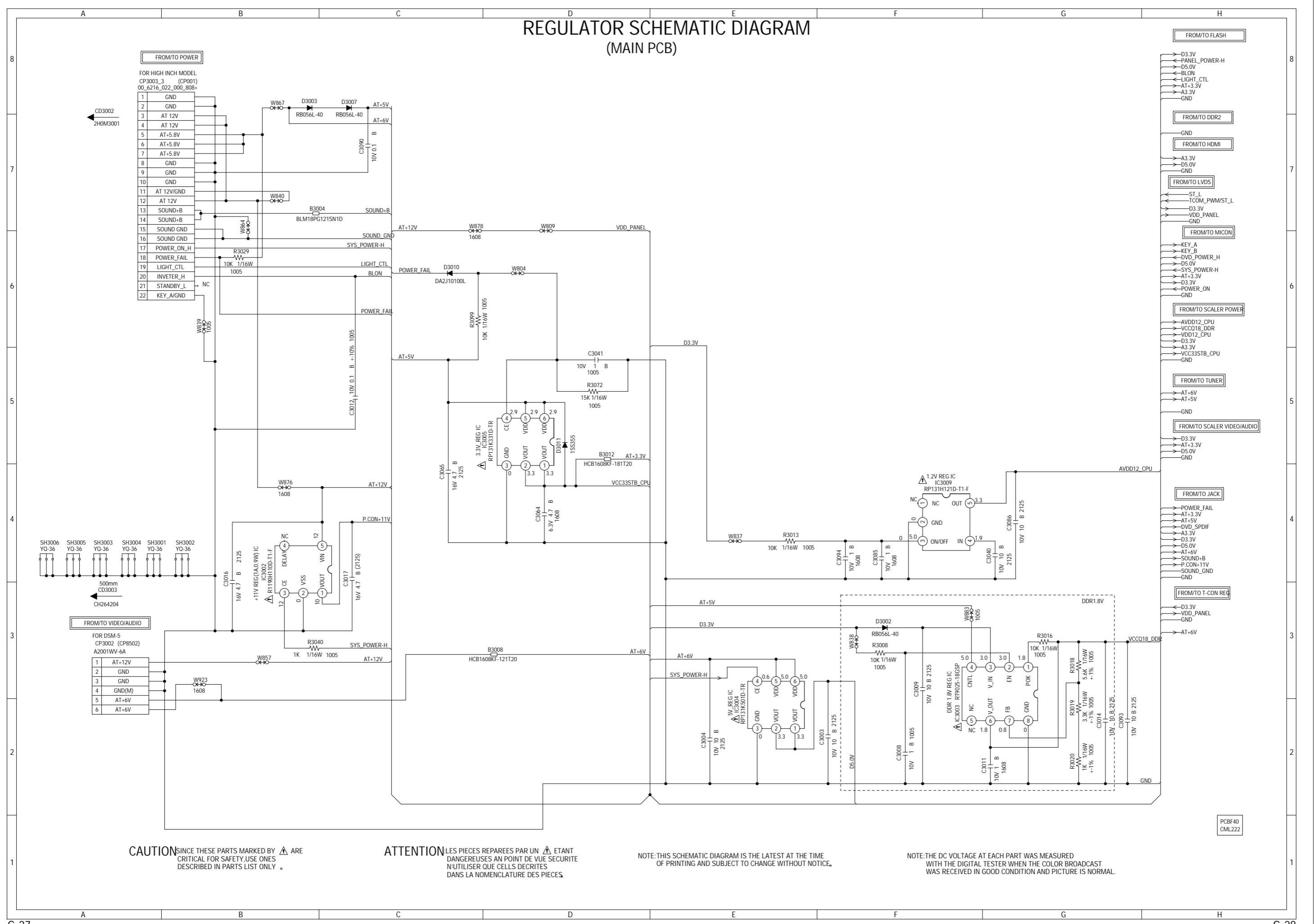
CAUTION: DIGITAL TRANSISTOR



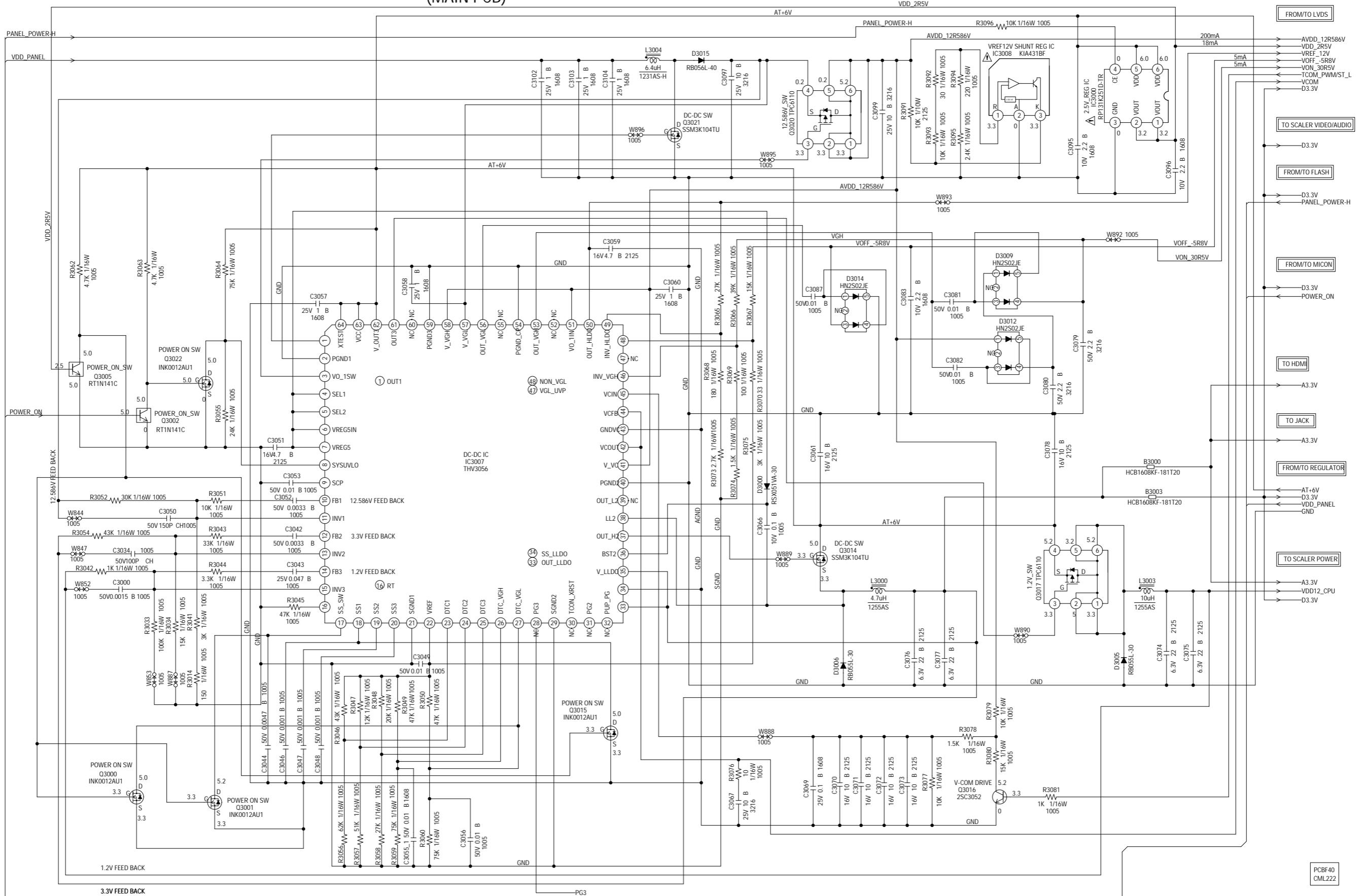
CAUTION: DIGITAL TRANSISTOR



# REGULATOR SCHEMATIC DIAGRAM (MAIN PCB)



# T-CON REGULATOR SCHEMATIC DIAGRAM (MAIN PCB)



**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIECES REPARÉES PAR UN ⚠ ETANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

**NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.**

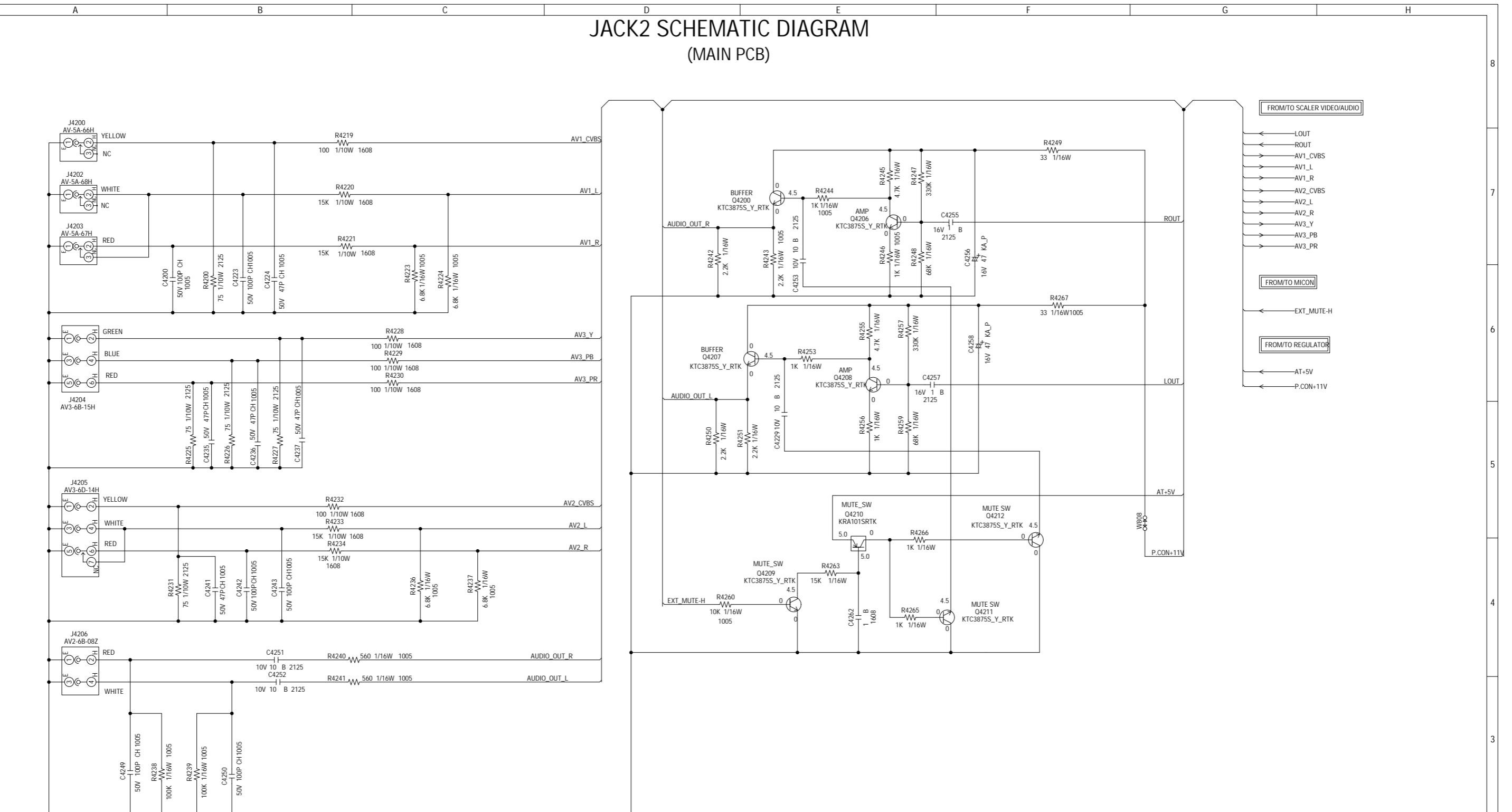
NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL

CAUTION: DIGITAL TRANSISTOR



# JACK2 SCHEMATIC DIAGRAM

(MAIN PCB)



NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

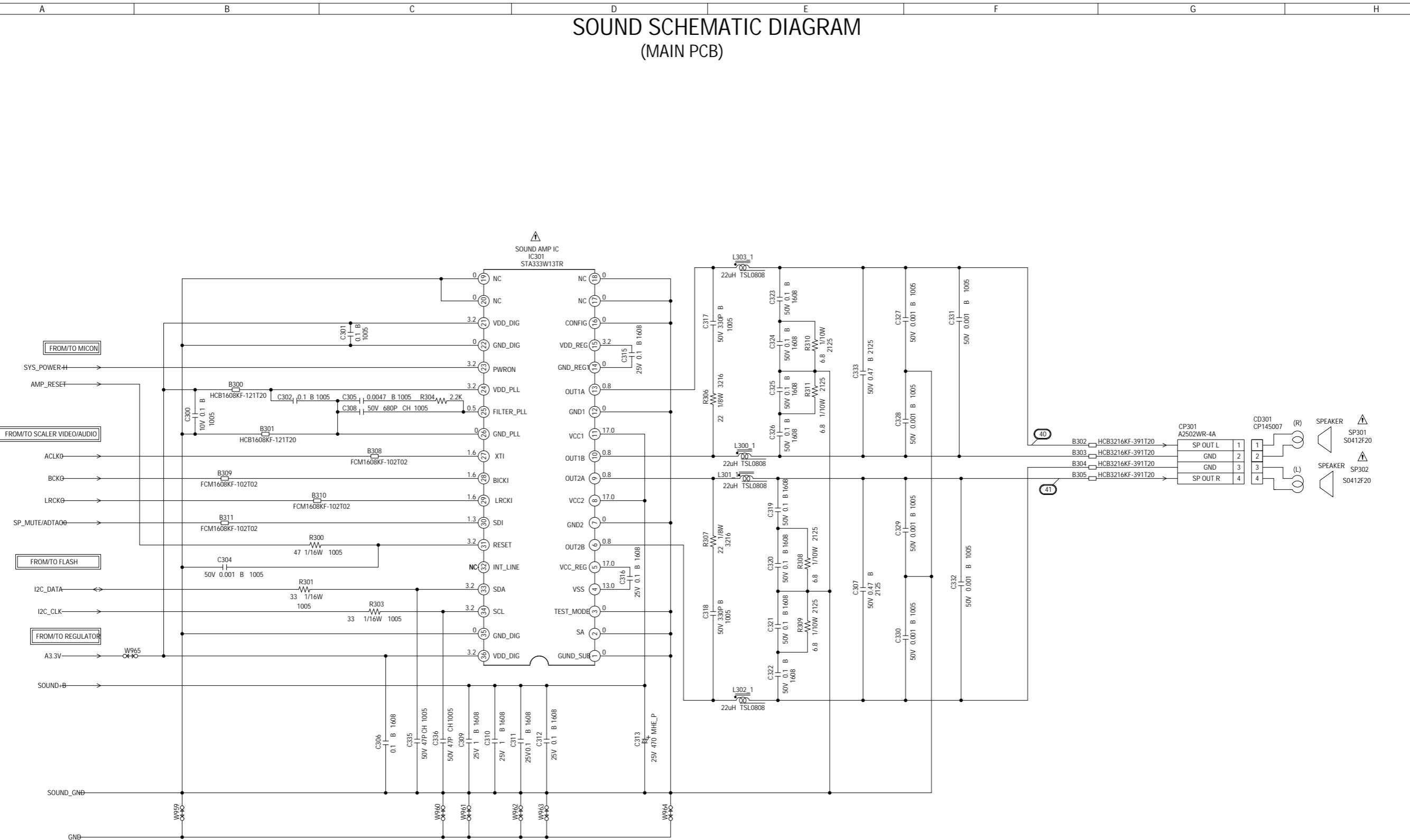
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: DIGITAL TRANSISTOR

PCBF40  
CML222

# SOUND SCHEMATIC DIAGRAM

(MAIN PCB)



**CAUTION:** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

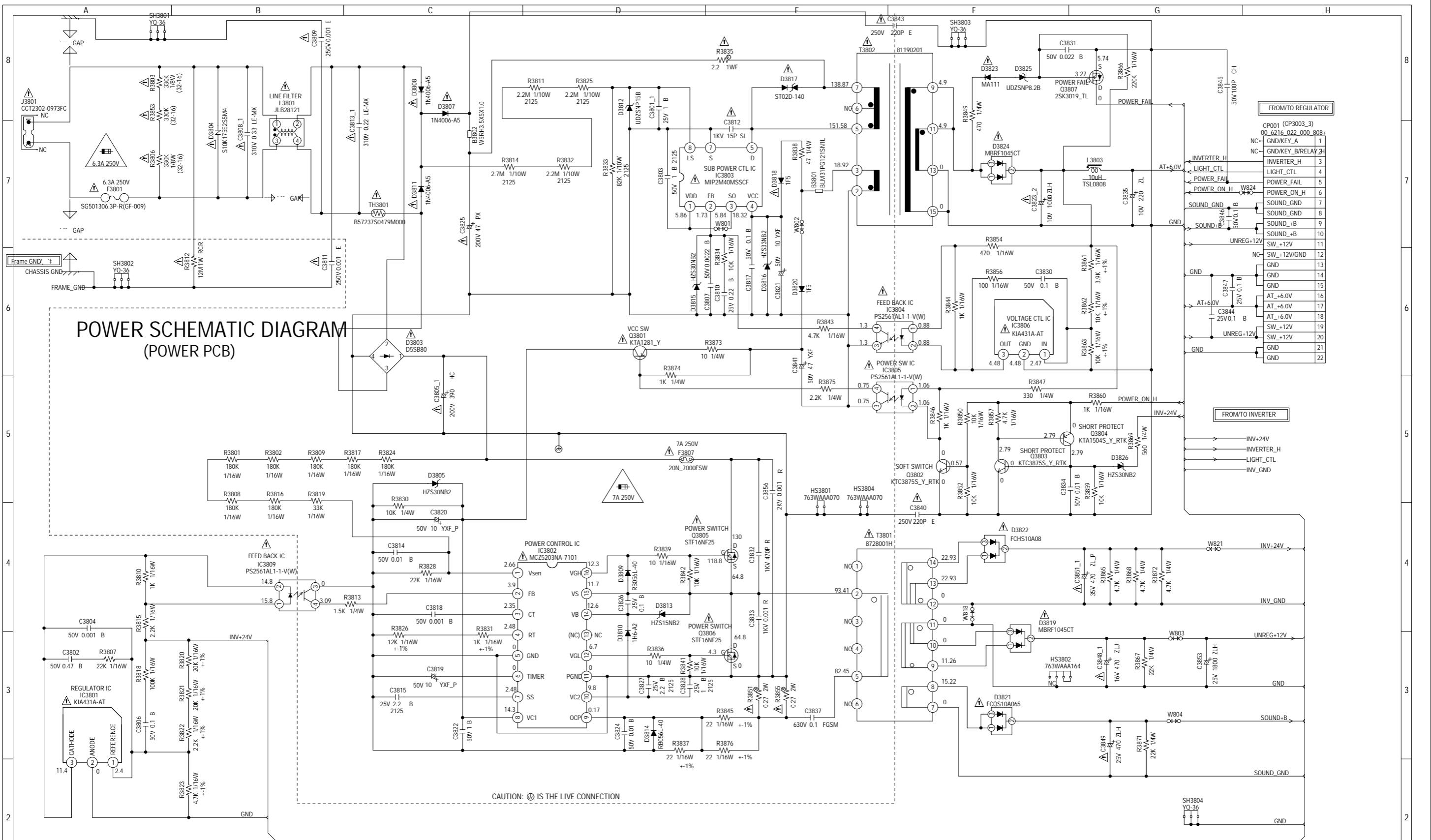
**ATTENTION:** LES PIECES REPEREES PAR UN ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRISES DANS LA NOMENCLATURE DES PIECES

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBF40  
CML222

## POWER SCHEMATIC DIAGRAM (POWER PCB)



**CAUTION:** FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE  
6.3A 250V (F3801) 7A 250V (F3807)

**ATTENTION:** POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIPE  
N'UTILISER QUE DES FUSIBLES DE MEME TYPE  
6.3A 250V (F3801) 7A 250V (F3807)

**CAUTION:** F3801 IS MANUFACTURED BY SKYGATE CO.,LTD., TYPE SCT.  
F3807 IS MANUFACTURED BY SKYGATE CO.,LTD., TYPE SCT.

**NOTE:** THE RESISTOR MARKED F IS FUSE RESISTOR.  
THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP  
IS NON POLAR ONE.

**NOTE:** THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

**NOTE:** THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

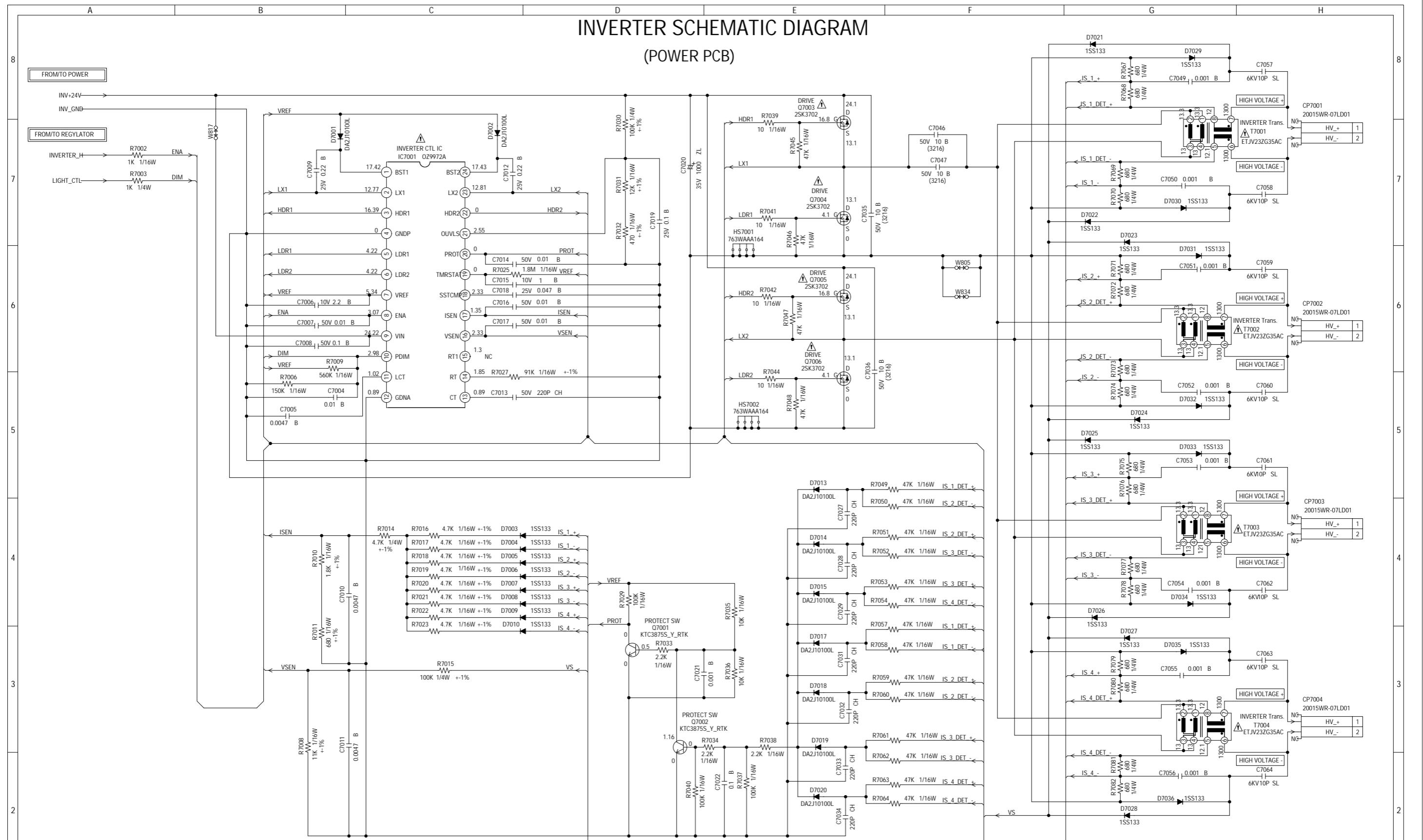
**CAUTION:** SINCE THESE PARTS MARKED BY (triangle)  
ARE CRITICAL FOR SAFETY, USE ONES  
DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIECES REPEREES PAR UN (triangle)  
ETANT DANGEREUSES EN POINT DE VUE SECURITE  
N'UTILISER QUE CELLES DECRISES  
DANS LA NOMENCLATURE DES PIECES.

PCB240  
CEK671

# INVERTER SCHEMATIC DIAGRAM

(POWER PCB)



**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION** LES PIECES REPAREES PAR UN ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLES DECrites DANS LA NOMENCLATURE DES PIECES.

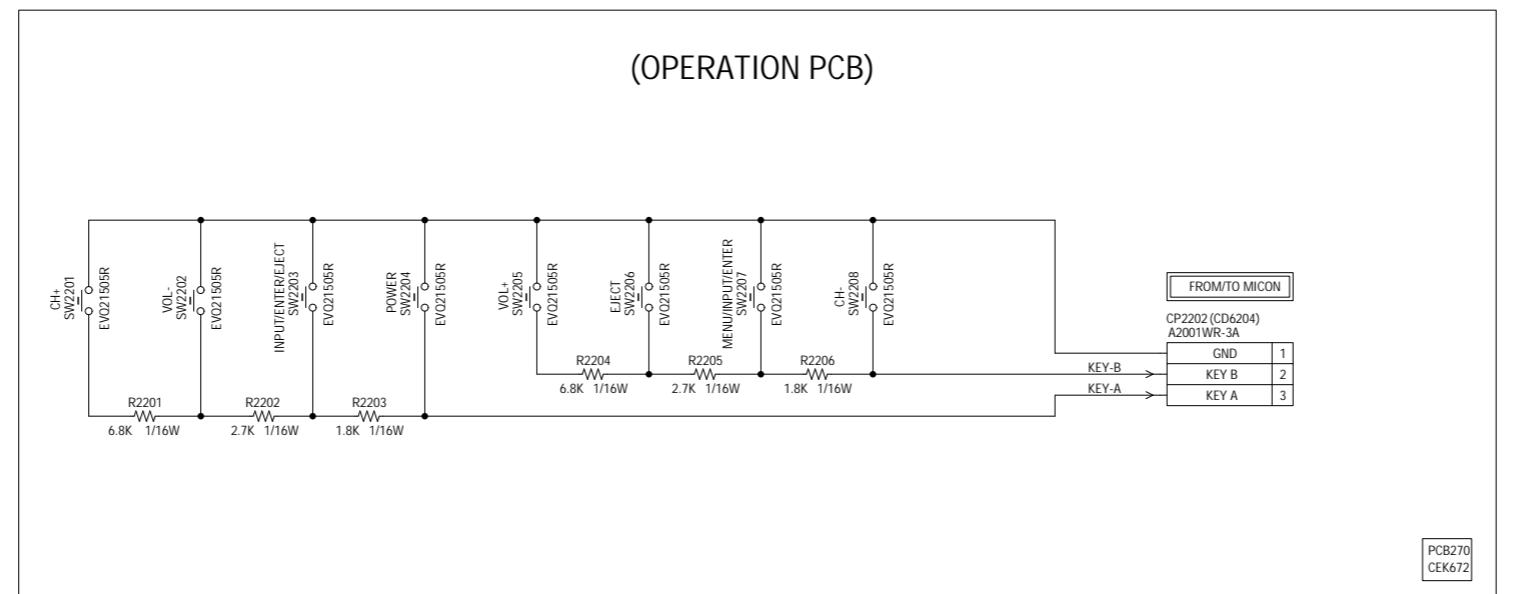
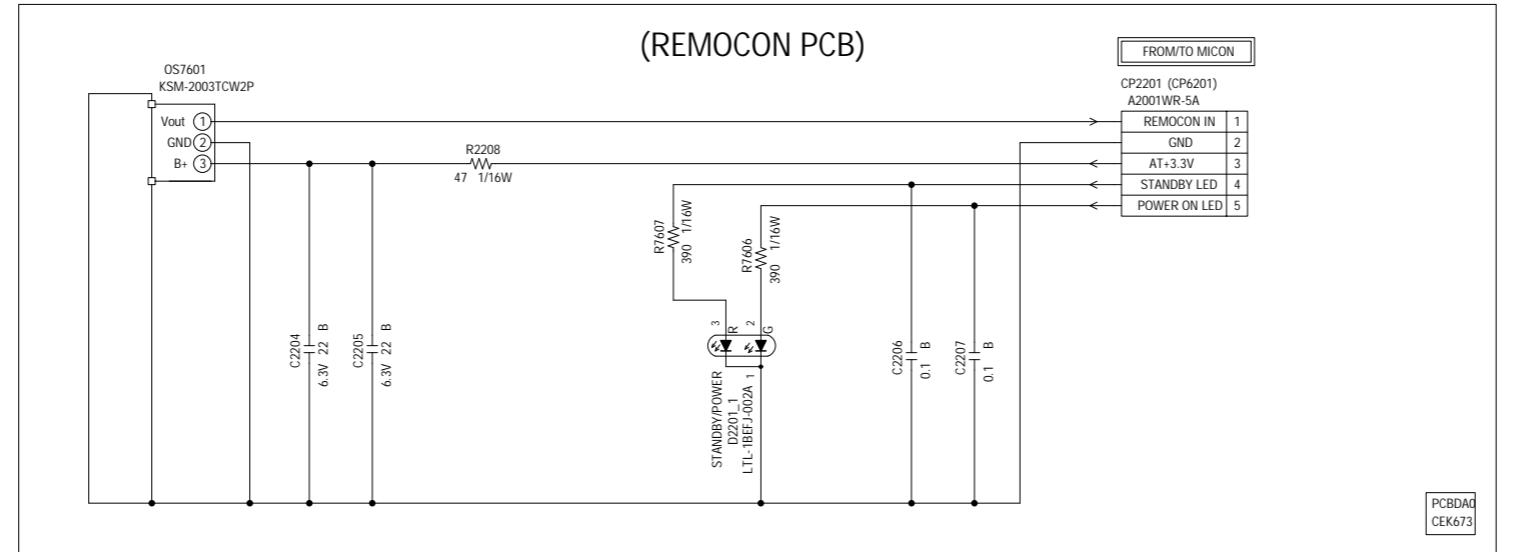
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR.  
THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

PCB240  
CEK671

OPERATION/REMOCON SCHEMATIC DIAGRAM  
(POWER PCB)

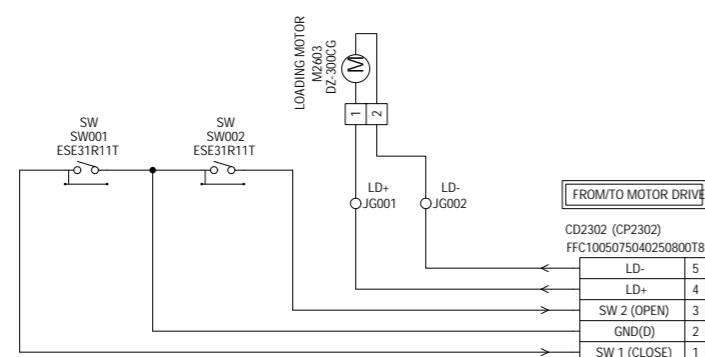


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

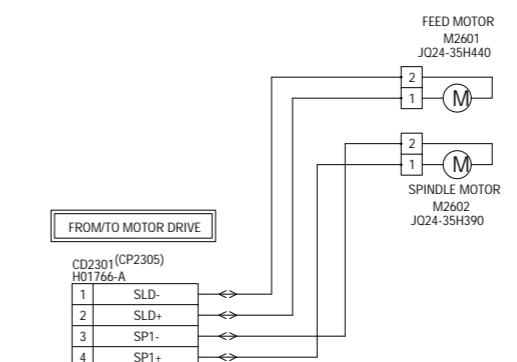
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

## LOADING MOTOR SCHEMATIC DIAGRAM

(LOADING MOTOR PCB)



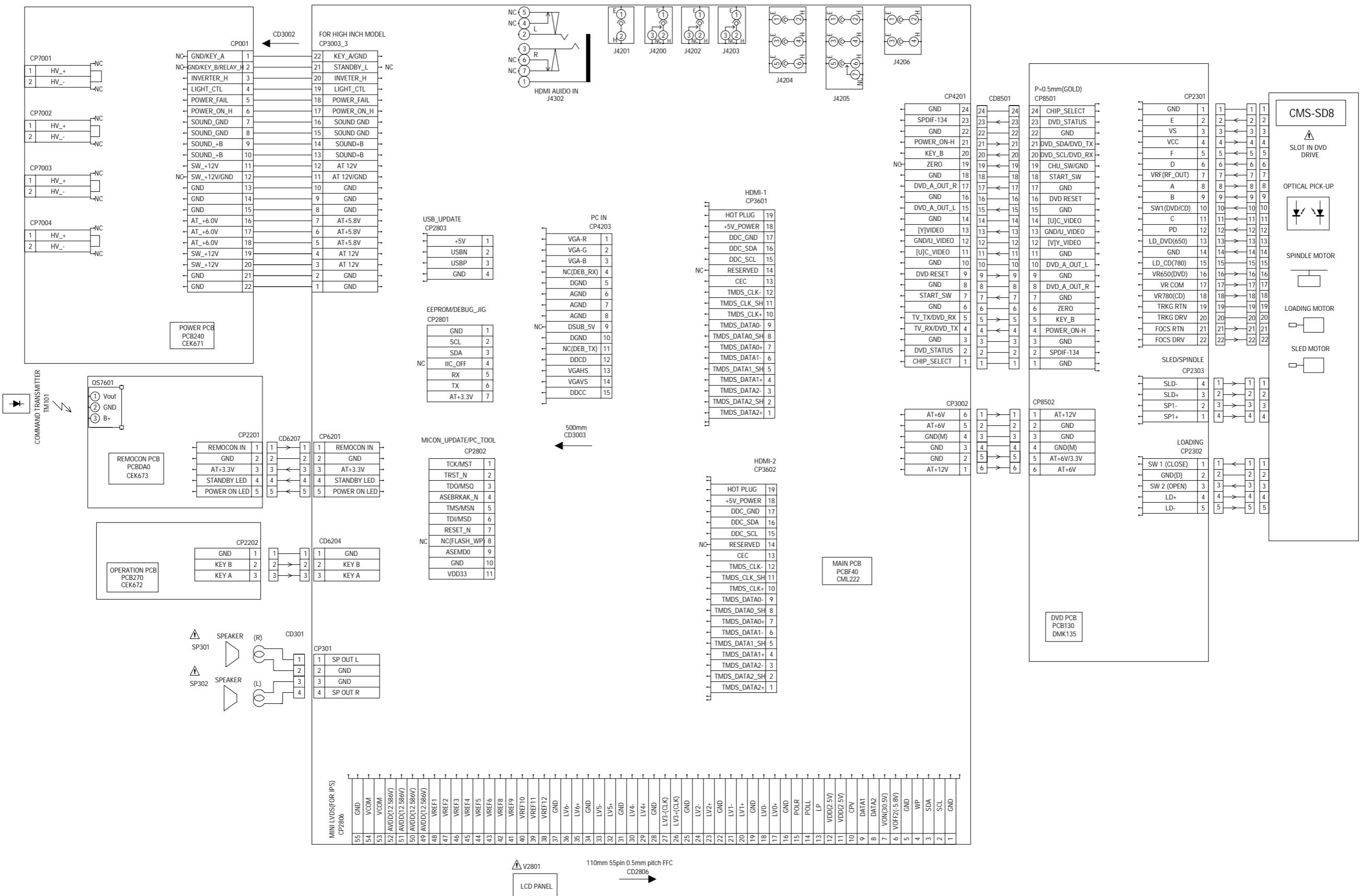
(PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS  
MEASURED WITH THE DIGITAL TESTER  
DURING PLAYBACK.

## INTERCONNECTION DIAGRAM



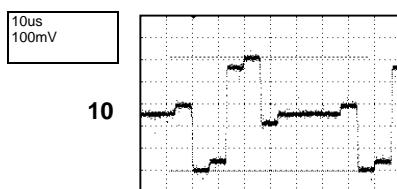
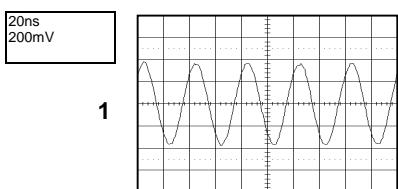
**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIECES REPARÉES PAR UN  ETANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

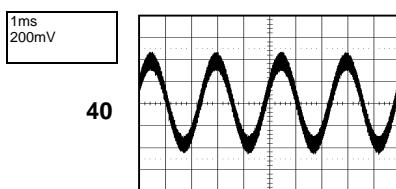
NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

## WAVEFORMS

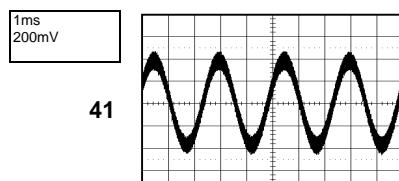
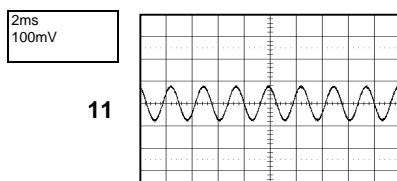
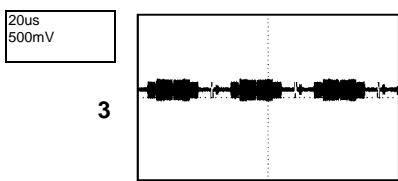
### FLASH



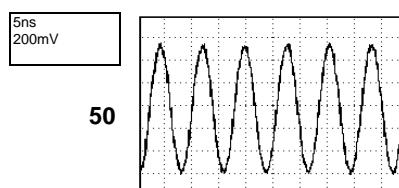
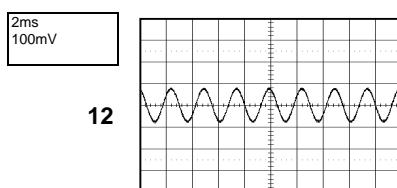
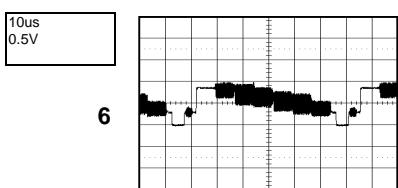
### SOUND



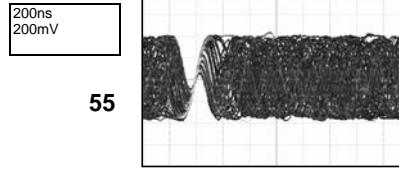
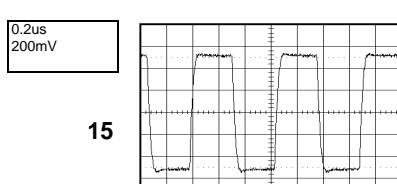
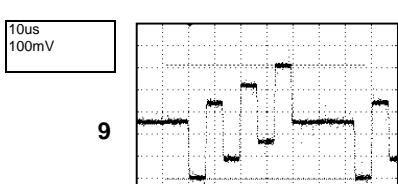
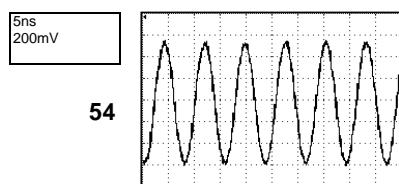
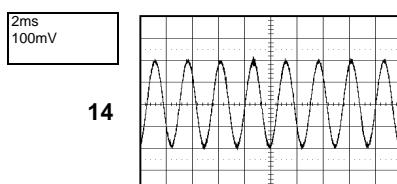
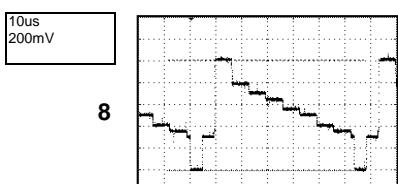
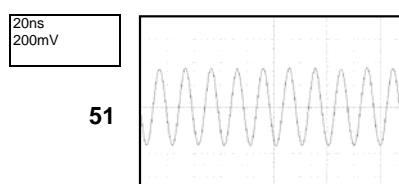
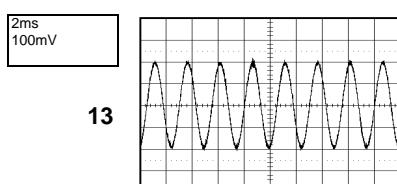
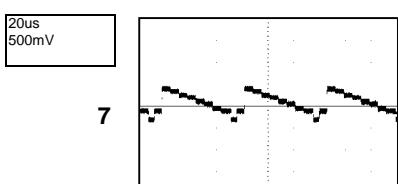
### SCALER VIDEO/AUDIO



### MPEG/MICON/DSP



### JACK



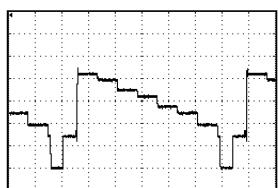
**NOTE :** The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

## WAVEFORMS

### VIDEO/AUDIO IN/OUT

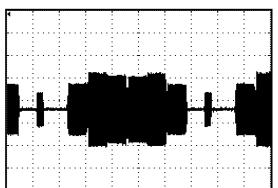
10us  
200mV

56



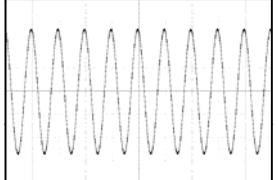
10us  
200mV

57



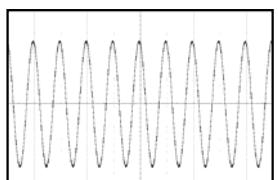
1ms  
1V

58



1ms  
1V

59



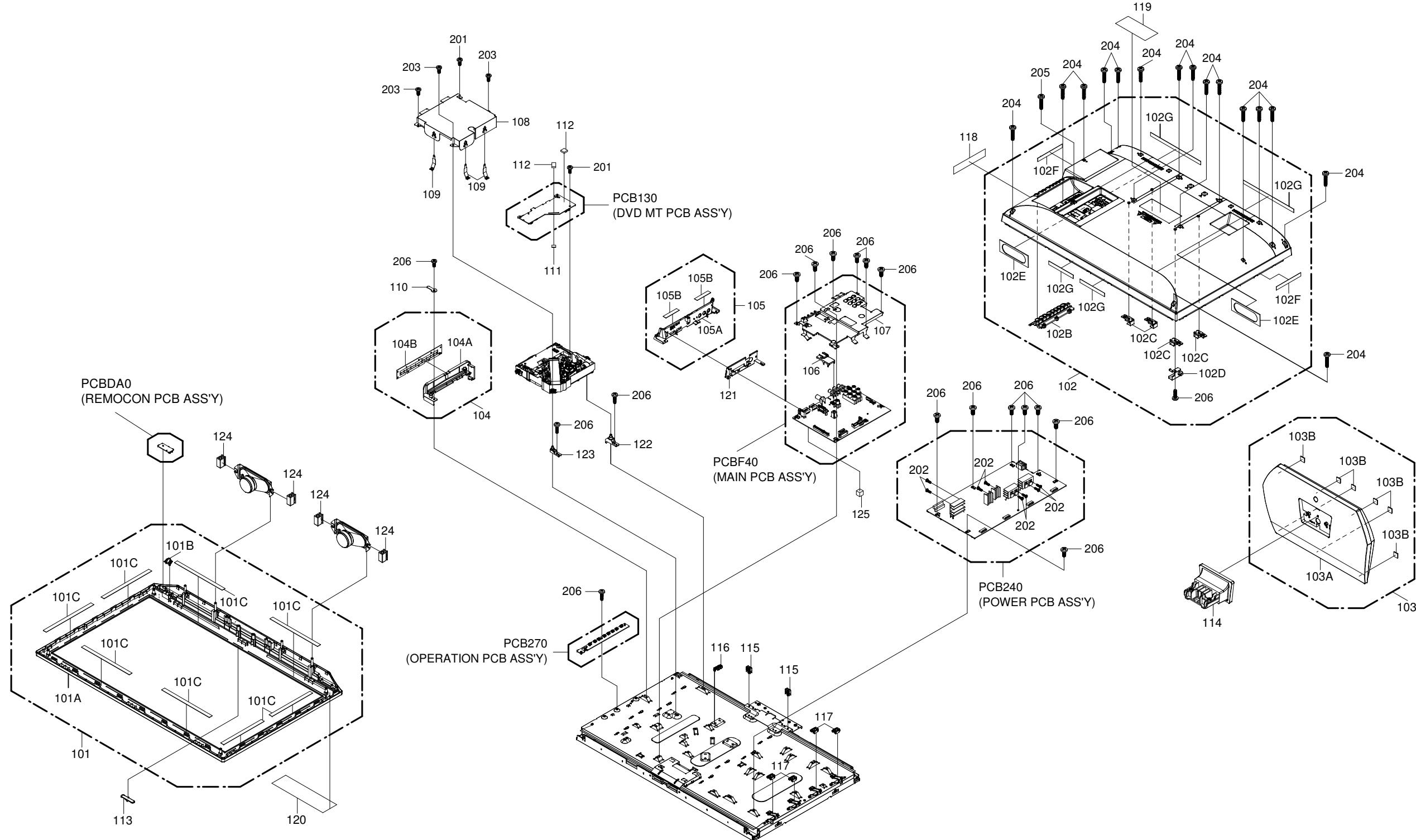
50ms  
1V

60

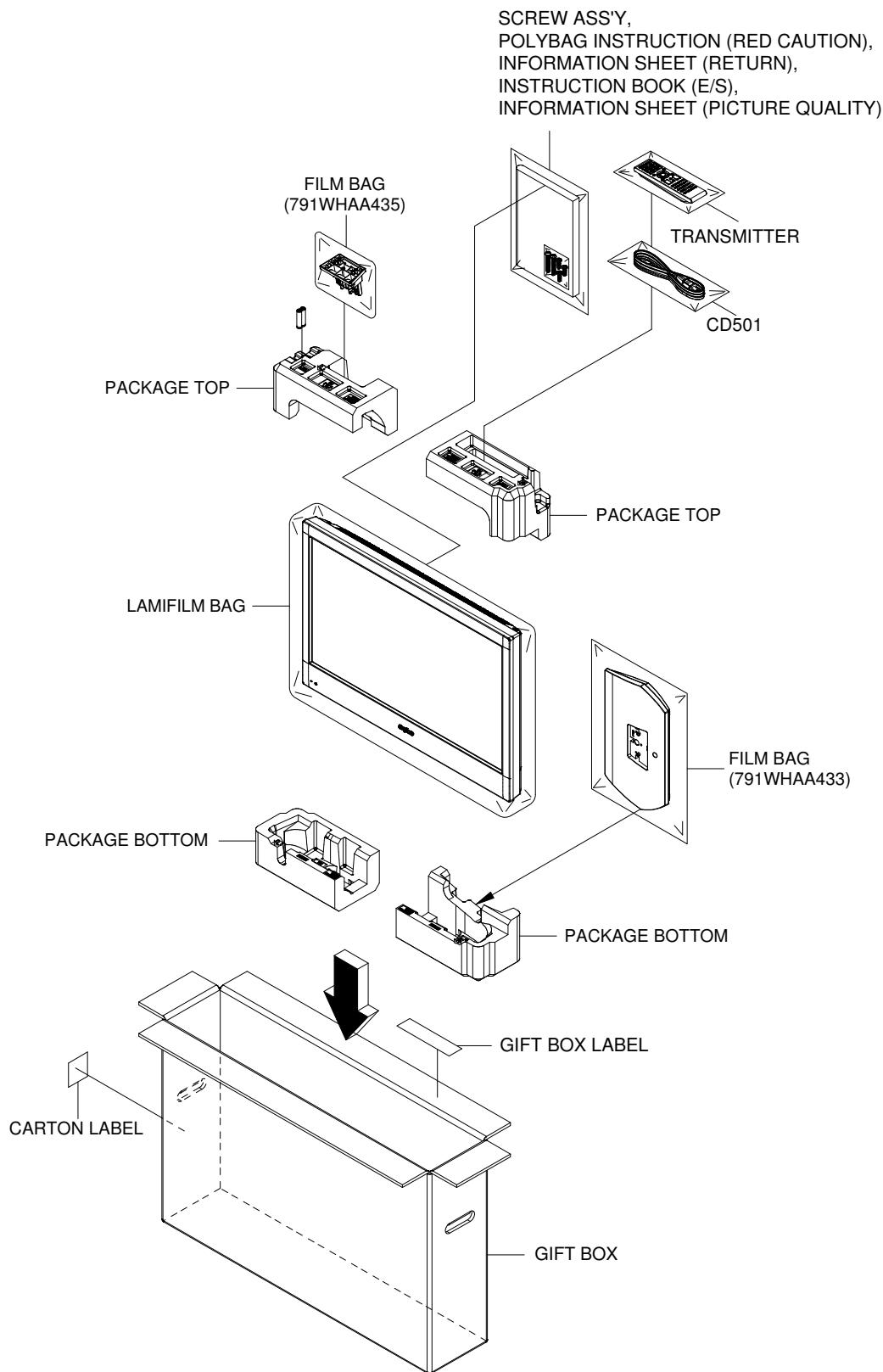


**NOTE :** The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

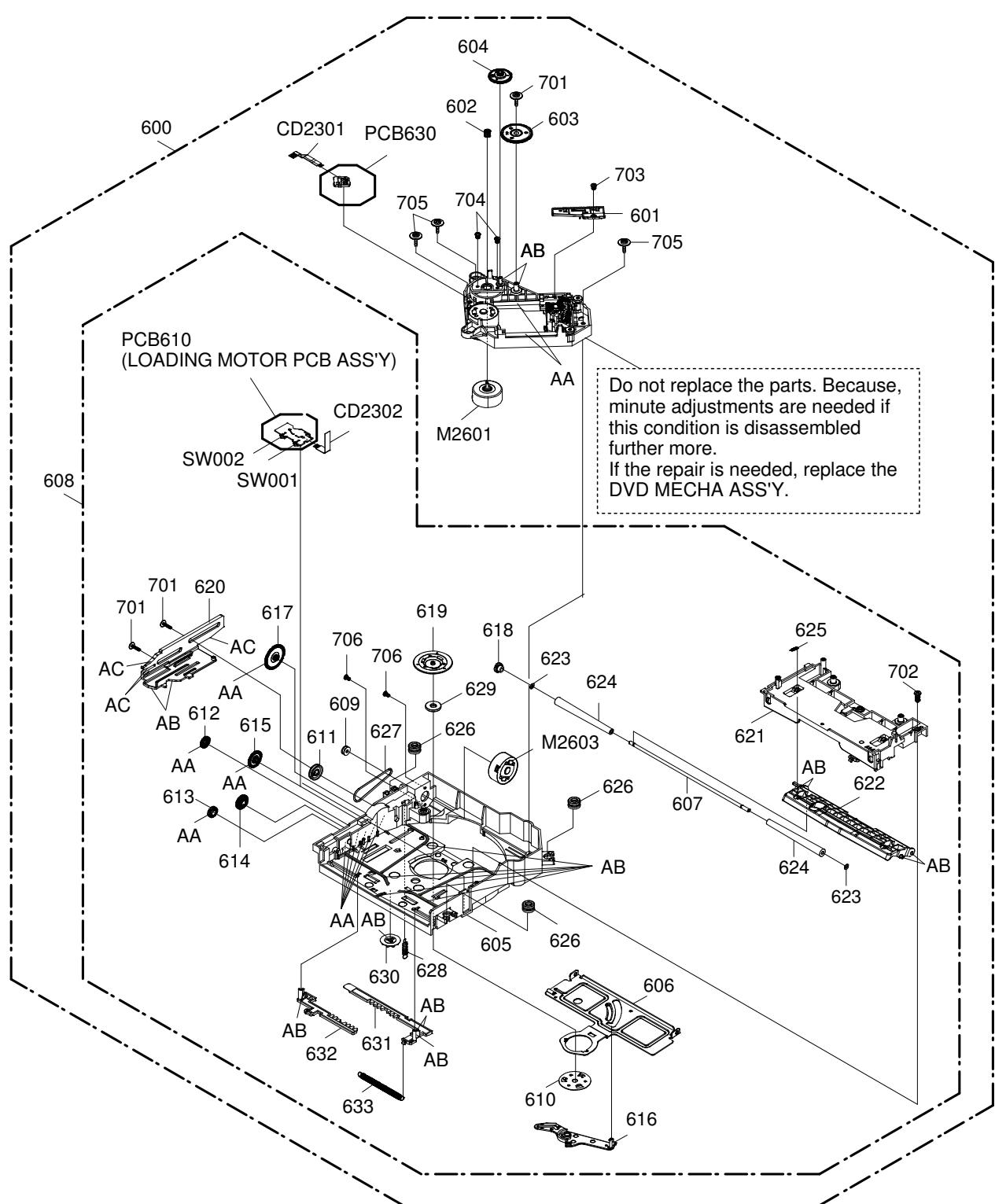
## MECHANICAL EXPLODED VIEW



## MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)



## DVD DECK EXPLODED VIEW



CLASS	PART NO.	PART NAME	MARK
GREASE	Y315141000	G-313Y	AA
	Y31D041000	CFD-5007Z	AB
	Y315181000	G-803B	AC

**NOTE:** Applying positions AA, AB and AC for the grease are displayed for this section. Check if the correct grease is applied for each position.

# MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
101	7A708A584A	FRONT CABI ASS'Y	
	7A708A751A	FRONT CABI ASS'Y	or
101A	708WPA0060	CABINET FRONT	
101B	713WPA0464	GLASS LED	
101C	800WQ0A250	FELT SHEET	
102	7A702B319D	BACK CABI ASS'Y	
102A	702WPA1571	CABINET BACK	
102B	735WPA0991	BUTTON FRAME	
102C	761WSAA387	ANGLE BACK	
102D	761WSA0898	ANGLE BACK 2	
102E	800WF0A031	CUSHION SPEAKER	
102F	800WQ0A230	FELT SHEET	
102G	800WQ00184	FELT SHEET	
103	7A704A299A	STAND ASS'Y	
103A	704WPA0176	STAND	
	704WPA0190	STAND	or
103B	800WRA0014	CUSHION LEG	
104	7A761A027A	HOLDER DECK B ASS'Y	
104A	761WPA0645	HOLDER DECK B	
104B	800WQ0A331	FELT SHEET (DVD)	
105	7A711A286A	PLATE JACK ASS'Y	
105A	761WPA0644	PLATE JACK	
105B	800WQ0A328	FELT SHEET	
106	752WSAA202	SHIELD TUNER	
107	752WSAA227	SHIELD DIGITAL	
108	752WSA0808	SHIELD DECK	
109	753WUAA006	SPRING EARTH HEAD AMP	
110	761WSAA357	EARTH RUG	
111	800WF0A034	CUSHION	
112	800WRAA002	CUSHION LEG	
113	723529A004	BADGE BRAND	
114	704WPA0177	STAND FRAME	
	704WPA0191	STAND FRAME	
115	709WPA0051	HOLDER WIRE	
116	709WPA0054	HOLDER WIRE	
117	709WPA0072	HOLDER WIRE	
118	721000A016	SHEET BUTTON	
119	722529A033	SHEET RATING	
120	723000F233	ENERGY GUIDE LABEL	
121	752WUA0026	SHIELD JACK	
122	761WPAA338	HOLDER DVD	
123	761WPA0647	HOLDER DECK A	
124	800CR00001	DAMPER SPEAKER	
125	800WFA0143	CUSHION	
201	811022080U	SCREW,TAP TITE(P) BIND	2x8
202	8109130A0U	SCREW TAP TITE(B) WH7	3x10
203	811022680U	SCREW TAP TITE(P) BIND	2.6x8
204	8109230A4S	SCREW TAP TITE(B) BIND	3x14
205	810923080S	SCREW TAP TITE(B) BIND	3x8
206	810923080U	SCREW TAP TITE(B) BIND	3x8
---	723000E802	CARTON LABEL	
---	723000E803	GIFT BOX LABEL	
---	791WHA252	LAMIFILM BAG	
---	791WHA433	FILM BAG	
---	791WHA435	FILM BAG	
---	792WHA0846	PACKAGE TOP	
---	792WHA0847	PACKAGE BOTTOM	
---	793WCDE661	GIFT BOX	
---	7G789A006A	SCREW ASS'Y	
---	J3710529A	INFORMATION SHEET(RETURN)	
---	J57Q0121B	INSTRUCTION BOOK(E/S)	
---	J57Q0159A	INFORMATION SHEET(PICTURE QUALITY)	
---	JA5KD001	POLYBAG INSTRUCTION(RED CAUTION)	

# DVD DECK REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
△ 600	A55Z01K650	DVD MECHA ASS'Y	A55Z01K650
601	92AAA0029A	FEED RACK ASSY	
602	92P100203A	GEAR MOTOR	
603	92P100201A	GEAR FEED	
604	92P100202A	GEAR MIDDLE	
605	92P100225A	FRAME	
606	92P000048A	PLATE LIFTER	
607	92P500018A	SHAFT ROLLER	
608	A55Z01K700	LOADER SUB ASS'Y	
609	92P100226A	PULLEY MOTOR	
610	92P000049A	PLATE CLAMPER	
611	92P100227A	GEAR PULLEY	
612	92P100228A	GEAR MAIN	
613	92P100229A	GEAR MIDDLE 1	
614	92P100230A	GEAR MIDDLE 2	
615	92P100231A	GEAR MIDDLE 3	
616	92P100239A	LEVER GUIDE	
617	92P100232A	GEAR MIDDLE 4	
618	92P100233A	GEAR ROLLER	
619	92P100234A	CLAMPER	
620	92P100238A	RACK BASE	
621	92P100240A	PLATE HOLDER	
622	92P100241A	SHUTTER ROLLER	
623	92P100180A	LUMIRROR WASHER	
624	92P200020A	ROLLER CONE	
625	92P300048A	SPRING SHUTTER	
626	92P200030A	INSULATOR	
627	92P200031A	BELT LOADING	
628	92P300051A	SPRING LIFTER	
629	92P400016A	MAGNET	
630	92P100235A	GEAR RACK DISC	
631	92P100236A	RACK DISC SENSOR L	
632	92P100237A	RACK DISC SENSOR R	
633	92P300050A	SPRING RACK D SENSOR	
701	92P700020A	SCREW TAP TITE(P) PAN WH5.4	1.7x8
702	92P700018A	SCREW TAP TITE(P) BIND	2.6x8
703	813381750U	SCREW,T-TITE(B)CAMERA PAN	M1.7x5.0 P3
704	814011723U	SCREW,PAN	M1.7x2.3 P3
705	92P700017A	SCREW TAP TITE(P)BIND WH7	M2.6x8
706	814011730U	SCREW,PAN	M1.7x3 P3
CD2301	12C1040401	CORD JUMPER	FFC1004040040250800T8-B00
CD2302	12C1050701	CORD JUMPER	FFC1005075040250800T8-B00
M2601	1515U98012	MOTOR	JQ24-35H440C
	1515K98010	MOTOR	DZ-300CE
M2603	1515U98013	MOTOR	JQ24-35H440D
M2603	1596Q98006	MOTOR	DZ-300CG
PCB610	A55Z01K610	LOADING MOTOR PCB ASS'Y	FEK008A
PCB630	13FEK009AW	PCB	FEK009A
SW001	0500101042	PUSH SWITCH	ESE31R11T
SW002	0500101042	PUSH SWITCH	ESE31R11T

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
RESISTORS				RESISTORS			
R300	R808R9470J	RC	47 OHM 1/16W	R2848	R808R9103J	RC	10K OHM 1/16W
R301	R808R9330J	RC	33 OHM 1/16W	R2849	R808R9101J	RC	100 OHM 1/16W
R303	R808R9330J	RC	33 OHM 1/16W	R2850	R808R9472J	RC	4.7K OHM 1/16W
R304	R808R9222J	RC	2.2K OHM 1/16W	R2851	R808R9221J	RC	220 OHM 1/16W
R306	R802R8220J	RC	22 OHM 1/8W	R2856	R808R9103J	RC	10K OHM 1/16W
R307	R802R8220J	RC	22 OHM 1/8W	R2857	R808R9102J	RC	1K OHM 1/16W
R308	R801R76R8J	RC	6.8 OHM 1/10W	R2858	R808R9472J	RC	4.7K OHM 1/16W
R309	R801R76R8J	RC	6.8 OHM 1/10W	R2859	R808R9472J	RC	4.7K OHM 1/16W
R310	R801R76R8J	RC	6.8 OHM 1/10W	R2862	R808R9750F	RC	75 OHM 1/16W
R311	R801R76R8J	RC	6.8 OHM 1/10W	R2866	R808R9103J	RC	10K OHM 1/16W
R2201	R803R9682J	RC	6.8K OHM 1/16W	R2867	R808R9103J	RC	10K OHM 1/16W
R2202	R803R9272J	RC	2.7K OHM 1/16W	R2871	R808R9472J	RC	4.7K OHM 1/16W
R2203	R803R9182J	RC	1.8K OHM 1/16W	R2875	R808R9472J	RC	4.7K OHM 1/16W
R2204	R803R9682J	RC	6.8K OHM 1/16W	R2876	R808R94R7J	RC	4.7 OHM 1/16W
R2205	R803R9272J	RC	2.7K OHM 1/16W	R2877	R808R9271F	RC	270 OHM 1/16W
R2206	R803R9182J	RC	1.8K OHM 1/16W	R2878	R808R9470F	RC	47 OHM 1/16W
R2208	R803R9470J	RC	47 OHM 1/16W	R2879	R808R9221F	RC	220 OHM 1/16W
R2301	R808R94R7J	RC	4.7 OHM 1/16W	R2881	R808R9750F	RC	75 OHM 1/16W
R2302	R808R94R7J	RC	4.7 OHM 1/16W	R2882	R808R9472J	RC	4.7K OHM 1/16W
R2306	R808R9332J	RC	3.3K OHM 1/16W	R2883	R808R9472J	RC	4.7K OHM 1/16W
R2307	R808R9332J	RC	3.3K OHM 1/16W	R2885	R808R9180F	RC	18 OHM 1/16W
R2308	R808R9103J	RC	10K OHM 1/16W	R2887	R808R9330F	RC	33 OHM 1/16W
R2309	R808R9332J	RC	3.3K OHM 1/16W	R2888	R808R9181F	RC	180 OHM 1/16W
R2310	R808R9103J	RC	10K OHM 1/16W	R2889	R808R94R7J	RC	4.7 OHM 1/16W
R2311	R808R9103J	RC	10K OHM 1/16W	R2890	R808R94R7J	RC	4.7 OHM 1/16W
R2312	R808R9183J	RC	18K OHM 1/16W	R2891	R808R9820F	RC	82 OHM 1/16W
R2313	R808R9183J	RC	18K OHM 1/16W	R2892	R808R9181F	RC	180 OHM 1/16W
R2315	R808R9822J	RC	8.2K OHM 1/16W	R2894	R808R9220J	RC	22 OHM 1/16W
R2316	R808R9332J	RC	3.3K OHM 1/16W	R2896	R808R9220J	RC	22 OHM 1/16W
R2319	R808R9103F	RC	10K OHM 1/16W	R2898	R808R9472J	RC	4.7K OHM 1/16W
R2325	R808R9471J	RC	470 OHM 1/16W	R2908	R808R9472J	RC	4.7K OHM 1/16W
R2326	R861R4010J	RC	1 OHM 1/4W	R2915	R808R9472J	RC	4.7K OHM 1/16W
R2328	R808R9103F	RC	10K OHM 1/16W	R2916	R808R9472J	RC	4.7K OHM 1/16W
R2342	R808R9103F	RC	10K OHM 1/16W	R2917	R808R9472J	RC	4.7K OHM 1/16W
R2344	R808R9103F	RC	10K OHM 1/16W	R2920	R808R9103J	RC	10K OHM 1/16W
R2800	R808R9101F	RC	100 OHM 1/16W	R3007	R808R9821J	RC	820 OHM 1/16W
R2801	R808R9221J	RC	220 OHM 1/16W	R3008	R808R9103J	RC	10K OHM 1/16W
R2802	R808R9103J	RC	10K OHM 1/16W	R3013	R808R9103J	RC	10K OHM 1/16W
R2804	R808R9103J	RC	10K OHM 1/16W	R3014	R808R9151J	RC	150 OHM 1/16W
R2805	R808R9103J	RC	10K OHM 1/16W	R3016	R808R9103J	RC	10K OHM 1/16W
R2806	R808R9103J	RC	10K OHM 1/16W	R3018	R808R9562F	RC	5.6K OHM 1/16W
R2808	R808R9471J	RC	470 OHM 1/16W	R3019	R808R9332F	RC	3.3K OHM 1/16W
R2809	R808R9151F	RC	150 OHM 1/16W	R3020	R808R9102F	RC	1K OHM 1/16W
R2810	R808R9472J	RC	4.7K OHM 1/16W	R3029	R808R9103J	RC	10K OHM 1/16W
R2811	R808R9103J	RC	10K OHM 1/16W	R3033	R808R9104J	RC	100K OHM 1/16W
R2812	R808R9472J	RC	4.7K OHM 1/16W	R3034	R808R9153J	RC	15K OHM 1/16W
R2813	R808R9102J	RC	1K OHM 1/16W	R3040	R808R9102J	RC	1K OHM 1/16W
R2815	R808R9220J	RC	22 OHM 1/16W	R3041	R808R9302J	RC	3K OHM 1/16W
R2817	R808R9220J	RC	22 OHM 1/16W	R3042	R808R9102J	RC	1K OHM 1/16W
R2818	R808R9220J	RC	22 OHM 1/16W	R3043	R808R9333J	RC	33K OHM 1/16W
R2819	R808R9220J	RC	22 OHM 1/16W	R3044	R808R9332J	RC	3.3K OHM 1/16W
R2820	R808R9472J	RC	4.7K OHM 1/16W	R3045	R808R9473J	RC	47K OHM 1/16W
R2821	R808R9101F	RC	100 OHM 1/16W	R3046	R808R9433J	RC	43K OHM 1/16W
R2822	R808R9472J	RC	4.7K OHM 1/16W	R3047	R808R9123J	RC	12K OHM 1/16W
R2823	R808R9472J	RC	4.7K OHM 1/16W	R3048	R808R9203J	RC	20K OHM 1/16W
R2824	R808R9472J	RC	4.7K OHM 1/16W	R3049	R808R9473J	RC	47K OHM 1/16W
R2825	R808R9390F	RC	39 OHM 1/16W	R3050	R808R9473J	RC	47K OHM 1/16W
R2827	R808R9562F	RC	5.6K OHM 1/16W	R3051	R808R9103J	RC	10K OHM 1/16W
R2828	R808R9472J	RC	4.7K OHM 1/16W	R3052	R808R9303J	RC	30K OHM 1/16W
R2829	R808R9330J	RC	33 OHM 1/16W	R3054	R808R9473J	RC	47K OHM 1/16W
R2830	R808R9120F	RC	12 OHM 1/16W	R3055	R808R9243J	RC	24K OHM 1/16W
R2831	R808R9151F	RC	150 OHM 1/16W	R3056	R808R9623J	RC	62K OHM 1/16W
R2832	R808R9220F	RC	22 OHM 1/16W	R3057	R808R9513J	RC	51K OHM 1/16W
R2833	R808R9181F	RC	180 OHM 1/16W	R3058	R808R9273J	RC	27K OHM 1/16W
R2834	R808R9120F	RC	12 OHM 1/16W	R3059	R808R9753J	RC	75K OHM 1/16W
R2835	R808R9100F	RC	10 OHM 1/16W	R3060	R808R9753J	RC	75K OHM 1/16W
R2837	R808R9181F	RC	180 OHM 1/16W	R3062	R808R9472J	RC	4.7K OHM 1/16W
R2838	R808R9472J	RC	4.7K OHM 1/16W	R3063	R808R9472J	RC	4.7K OHM 1/16W
R2839	R808R9472J	RC	4.7K OHM 1/16W	R3064	R808R9753J	RC	75K OHM 1/16W
R2840	R808R9333J	RC	33K OHM 1/16W	R3065	R808R9273J	RC	27K OHM 1/16W
R2841	R808R9820F	RC	82 OHM 1/16W	R3066	R808R9393J	RC	39K OHM 1/16W
R2842	R808R9100J	RC	10 OHM 1/16W	R3067	R808R9153J	RC	15K OHM 1/16W
R2843	R808R9100J	RC	10 OHM 1/16W	R3068	R808R9181J	RC	180 OHM 1/16W
R2844	R808R9101J	RC	100 OHM 1/16W	R3069	R808R9101J	RC	100 OHM 1/16W
R2845	R808R9101F	RC	100 OHM 1/16W	R3070	R808R9330J	RC	33 OHM 1/16W
R2846	R808R9101F	RC	100 OHM 1/16W	R3072	R808R9153J	RC	15K OHM 1/16W
R2847	R808R9562F	RC	5.6K OHM 1/16W	R3073	R808R9272J	RC	2.7K OHM 1/16W

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
RESISTORS				RESISTORS			
R3074	R808R9152J	RC	1.5K OHM 1/16W	R3846	R803R9102J	RC	1K OHM 1/16W
R3075	R808R9302J	RC	3K OHM 1/16W	R3847	R002T4331J	RC	330 OHM 1/4W
R3076	R808R9100J	RC	10 OHM 1/16W	R3849	R002T4471J	RC	470 OHM 1/4W
R3077	R808R9103J	RC	10K OHM 1/16W	R3850	R803R9103J	RC	10K OHM 1/16W
R3078	R808R9152J	RC	1.5K OHM 1/16W	△R3851	R3K78AR27J	R, METAL OXIDE	0.27 OHM 2W
R3079	R808R9103J	RC	10K OHM 1/16W	R3852	R803R9103J	RC	10K OHM 1/16W
R3080	R808R9153J	RC	15K OHM 1/16W	△R3853	R8X2R8334J	RC	330K OHM 1/8W
R3081	R808R9102J	RC	1K OHM 1/16W	R3854	R803R9471J	RC	470 OHM 1/16W
R3091	R801R7103J	RC	10K OHM 1/10W	△R3855	R3K78AR27J	R, METAL OXIDE	0.27 OHM 2W
R3092	R808R9300J	RC	30 OHM 1/16W	R3856	R803R9101J	RC	100 OHM 1/16W
R3093	R808R9103J	RC	10K OHM 1/16W	R3857	R803R9472J	RC	4.7K OHM 1/16W
R3094	R808R9221J	RC	220 OHM 1/16W	R3859	R803R9103J	RC	10K OHM 1/16W
R3095	R808R9242J	RC	2.4K OHM 1/16W	R3860	R803R9102J	RC	1K OHM 1/16W
R3096	R808R9103J	RC	10K OHM 1/16W	R3861	R803R9392F	RC	3.9K OHM 1/16W
R3099	R808R9103J	RC	10K OHM 1/16W	R3862	R803R9103F	RC	10K OHM 1/16W
R3601	R808R9100J	RC	10 OHM 1/16W	R3863	R803R9103F	RC	10K OHM 1/16W
R3602	R808R9100J	RC	10 OHM 1/16W	R3865	R002T4472J	RC	4.7K OHM 1/4W
R3611	R808R9473J	RC	47K OHM 1/16W	R3866	R803R9224J	RC	220K OHM 1/16W
R3613	R808R9473J	RC	47K OHM 1/16W	R3867	R002T4223J	RC	22K OHM 1/4W
R3615	R808R9473J	RC	47K OHM 1/16W	R3868	R002T4472J	RC	4.7K OHM 1/4W
R3616	R808R9152J	RC	1.5K OHM 1/16W	R3869	R002T4561J	RC	560 OHM 1/4W
R3617	R808R9473J	RC	47K OHM 1/16W	R3871	R002T4223J	RC	22K OHM 1/4W
R3618	R808R9152J	RC	1.5K OHM 1/16W	R3872	R002T4472J	RC	4.7K OHM 1/4W
R3619	R808R9302J	RC	3K OHM 1/16W	R3873	R002T4100J	RC	10 OHM 1/4W
R3620	R808R9302J	RC	3K OHM 1/16W	R3874	R002T4102J	RC	1K OHM 1/4W
R3622	R808R9472J	RC	4.7K OHM 1/16W	R3875	R002T4222J	RC	2.2K OHM 1/4W
R3623	R808R9472J	RC	4.7K OHM 1/16W	R3876	R803R9220F	RC	22 OHM 1/16W
R3624	R808R9102F	RC	1K OHM 1/16W	R4002	R808R9103J	RC	10K OHM 1/16W
R3625	R808R9102F	RC	1K OHM 1/16W	R4004	R808R9103J	RC	10K OHM 1/16W
R3627	R808R9473J	RC	47K OHM 1/16W	R4005	R808R9151J	RC	150 OHM 1/16W
R3628	R808R9473J	RC	47K OHM 1/16W	R4006	R808R9472J	RC	4.7K OHM 1/16W
R3629	R808R9104J	RC	100K OHM 1/16W	R4009	R808R9330J	RC	33 OHM 1/16W
R3632	R808R9472J	RC	4.7K OHM 1/16W	R4014	R808R9153J	RC	15K OHM 1/16W
R3633	R808R9104J	RC	100K OHM 1/16W	R4015	R808R9133F	RC	13K OHM 1/16W
R3644	R808R9302F	RC	3K OHM 1/16W	R4016	R808R9822F	RC	8.2K OHM 1/16W
R3645	R808R9222F	RC	2.2K OHM 1/16W	R4017	R808R9103J	RC	10K OHM 1/16W
R3646	R808R9561F	RC	560 OHM 1/16W	R4018	R808R9133F	RC	13K OHM 1/16W
R3801	R803R9184J	RC	180K OHM 1/16W	R4019	R808R9133F	RC	13K OHM 1/16W
R3802	R803R9184J	RC	180K OHM 1/16W	R4020	R808R9103J	RC	10K OHM 1/16W
△R3803	R8X2R8334J	RC	330K OHM 1/8W	R4024	R808R9104J	RC	100K OHM 1/16W
△R3806	R8X2R8334J	RC	330K OHM 1/8W	R4026	R808R9103J	RC	10K OHM 1/16W
R3807	R803R9223J	RC	22K OHM 1/16W	R4027	R808R9330J	RC	33 OHM 1/16W
R3808	R803R9184J	RC	180K OHM 1/16W	R4031	R808R9330J	RC	33 OHM 1/16W
R3809	R803R9184J	RC	180K OHM 1/16W	R4034	R808R9103J	RC	10K OHM 1/16W
R3810	R803R9102J	RC	1K OHM 1/16W	R4039	R808R9512J	RC	5.1K OHM 1/16W
R3811	R801R7225J	RC	2.2M OHM 1/10W	R4040	R808R9103J	RC	10K OHM 1/16W
△R3812	RC31X1126J	RC	12M OHM 1W	R4042	R808R9103J	RC	10K OHM 1/16W
R3813	R002T4152J	RC	1.5K OHM 1/4W	R4043	R808R9330J	RC	33 OHM 1/16W
R3814	R801R7275J	RC	2.7M OHM 1/10W	R4044	R808R9103J	RC	10K OHM 1/16W
R3815	R803R9222J	RC	2.2K OHM 1/16W	R4045	R808R9472J	RC	4.7K OHM 1/16W
R3816	R803R9184J	RC	180K OHM 1/16W	R4046	R808R9681F	RC	680 OHM 1/16W
R3817	R803R9184J	RC	180K OHM 1/16W	R4047	R808R9103J	RC	10K OHM 1/16W
R3818	R803R9104J	RC	100K OHM 1/16W	R4050	R808R9103J	RC	10K OHM 1/16W
R3819	R803R9333J	RC	33K OHM 1/16W	R4052	R808R9471J	RC	470 OHM 1/16W
R3820	R803R9203F	RC	20K OHM 1/16W	R4053	R808R9330J	RC	33 OHM 1/16W
R3821	R803R9203F	RC	20K OHM 1/16W	R4054	R808R9330J	RC	33 OHM 1/16W
R3822	R803R9222F	RC	2.2K OHM 1/16W	R4055	R808R96R8J	RC	6.8 OHM 1/16W
R3823	R803R9472F	RC	4.7K OHM 1/16W	R4056	R808R9100J	RC	10 OHM 1/16W
R3824	R803R9184J	RC	180K OHM 1/16W	R4057	R808R9680J	RC	68 OHM 1/16W
R3825	R801R7225J	RC	2.2M OHM 1/10W	R4059	R808R9750F	RC	75 OHM 1/16W
R3826	R803R9123F	RC	12K OHM 1/16W	R4060	R808R9750F	RC	75 OHM 1/16W
R3828	R803R9223J	RC	22K OHM 1/16W	R4061	R808R9750F	RC	75 OHM 1/16W
R3830	R002T4103J	RC	10K OHM 1/4W	R4062	R808R9750F	RC	75 OHM 1/16W
R3831	R803R9102F	RC	1K OHM 1/16W	R4066	R808R9330J	RC	33 OHM 1/16W
R3832	R801R7225J	RC	2.2M OHM 1/10W	R4200	R801R7750J	RC	75 OHM 1/10W
R3833	R801R7823J	RC	82K OHM 1/10W	R4201	R803R7101J	RC	100 OHM 1/10W
R3834	R803R9103J	RC	10K OHM 1/16W	R4202	R803R7101J	RC	100 OHM 1/10W
△R3835	R638812R2J	R,FUSE	2.2 OHM 1W	R4203	R803R7101J	RC	100 OHM 1/10W
R3836	R002T4100J	RC	10 OHM 1/4W	R4204	R801R7750J	RC	75 OHM 1/10W
R3837	R803R9220F	RC	22 OHM 1/16W	R4205	R801R7750J	RC	75 OHM 1/10W
R3838	R002T4470J	RC	47 OHM 1/4W	R4206	R801R7750J	RC	75 OHM 1/10W
R3839	R803R9100J	RC	10 OHM 1/16W	R4207	R808R9472J	RC	4.7K OHM 1/16W
R3841	R803R9103J	RC	10K OHM 1/16W	R4208	R808R9472J	RC	4.7K OHM 1/16W
R3842	R803R9103J	RC	10K OHM 1/16W	R4209	R808R9472J	RC	4.7K OHM 1/16W
R3843	R803R9472J	RC	4.7K OHM 1/16W	R4210	R808R9750J	RC	75 OHM 1/16W
R3844	R803R9102J	RC	1K OHM 1/16W	R4211	R808R9472J	RC	4.7K OHM 1/16W
R3845	R803R9220F	RC	22 OHM 1/16W	R4212	R808R9750J	RC	75 OHM 1/16W

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
RESISTORS				RESISTORS			
R4213	R808R9104J	RC	100K OHM 1/16W	R7016	R803R9472F	RC	4.7K OHM 1/16W
R4214	R808R9680J	RC	68 OHM 1/16W	R7017	R803R9472F	RC	4.7K OHM 1/16W
R4215	R808R9221J	RC	220 OHM 1/16W	R7018	R803R9472F	RC	4.7K OHM 1/16W
R4216	R808R9152J	RC	1.5K OHM 1/16W	R7019	R803R9472F	RC	4.7K OHM 1/16W
R4217	R808R9332J	RC	3.3K OHM 1/16W	R7020	R803R9472F	RC	4.7K OHM 1/16W
R4218	R808R9222J	RC	2.2K OHM 1/16W	R7021	R803R9472F	RC	4.7K OHM 1/16W
R4219	R803R7101J	RC	100 OHM 1/10W	R7022	R803R9472F	RC	4.7K OHM 1/16W
R4220	R803R7153J	RC	15K OHM 1/10W	R7023	R803R9472F	RC	4.7K OHM 1/16W
R4221	R803R7153J	RC	15K OHM 1/10W	R7025	R803R9185J	RC	1.8M OHM 1/16W
R4223	R808R9682J	RC	6.8K OHM 1/16W	R7027	R803R9913F	RC	91K OHM 1/16W
R4224	R808R9682J	RC	6.8K OHM 1/16W	R7029	R803R9104J	RC	100K OHM 1/16W
R4225	R801R7750J	RC	75 OHM 1/10W	R7030	R4K1T4104F	R,METAL	100K OHM 1/4W
R4226	R801R7750J	RC	75 OHM 1/10W	R7031	R803R9123F	RC	12K OHM 1/16W
R4227	R801R7750J	RC	75 OHM 1/10W	R7032	R803R9471F	RC	470 OHM 1/16W
R4228	R803R7101J	RC	100 OHM 1/10W	R7033	R803R9222J	RC	2.2K OHM 1/16W
R4229	R803R7101J	RC	100 OHM 1/10W	R7034	R803R9222J	RC	2.2K OHM 1/16W
R4230	R803R7101J	RC	100 OHM 1/10W	R7035	R803R9103J	RC	10K OHM 1/16W
R4231	R801R7750J	RC	75 OHM 1/10W	R7036	R803R9103J	RC	10K OHM 1/16W
R4232	R803R7101J	RC	100 OHM 1/10W	R7037	R803R9104J	RC	100K OHM 1/16W
R4233	R803R7153J	RC	15K OHM 1/10W	R7038	R803R9222J	RC	2.2K OHM 1/16W
R4234	R803R7153J	RC	15K OHM 1/10W	R7039	R803R9100J	RC	10 OHM 1/16W
R4236	R808R9682J	RC	6.8K OHM 1/16W	R7040	R803R9104J	RC	100K OHM 1/16W
R4237	R808R9682J	RC	6.8K OHM 1/16W	R7041	R803R9100J	RC	10 OHM 1/16W
R4238	R808R9104J	RC	100K OHM 1/16W	R7042	R803R9100J	RC	10 OHM 1/16W
R4239	R808R9104J	RC	100K OHM 1/16W	R7044	R803R9100J	RC	10 OHM 1/16W
R4240	R808R9561J	RC	560 OHM 1/16W	R7045	R803R9473J	RC	47K OHM 1/16W
R4241	R808R9561J	RC	560 OHM 1/16W	R7046	R803R9473J	RC	47K OHM 1/16W
R4242	R808R9222J	RC	2.2K OHM 1/16W	R7047	R803R9473J	RC	47K OHM 1/16W
R4243	R808R9222J	RC	2.2K OHM 1/16W	R7048	R803R9473J	RC	47K OHM 1/16W
R4244	R808R9102J	RC	1K OHM 1/16W	R7049	R803R9473J	RC	47K OHM 1/16W
R4245	R808R9472J	RC	4.7K OHM 1/16W	R7050	R803R9473J	RC	47K OHM 1/16W
R4246	R808R9102J	RC	1K OHM 1/16W	R7051	R803R9473J	RC	47K OHM 1/16W
R4247	R808R9334J	RC	330K OHM 1/16W	R7052	R803R9473J	RC	47K OHM 1/16W
R4248	R808R9683J	RC	68K OHM 1/16W	R7053	R803R9473J	RC	47K OHM 1/16W
R4249	R808R9330J	RC	33 OHM 1/16W	R7054	R803R9473J	RC	47K OHM 1/16W
R4250	R808R9222J	RC	2.2K OHM 1/16W	R7057	R803R9473J	RC	47K OHM 1/16W
R4251	R808R9222J	RC	2.2K OHM 1/16W	R7058	R803R9473J	RC	47K OHM 1/16W
R4252	R808R9103J	RC	10K OHM 1/16W	R7059	R803R9473J	RC	47K OHM 1/16W
R4253	R808R9102J	RC	1K OHM 1/16W	R7060	R803R9473J	RC	47K OHM 1/16W
R4254	R808R9103J	RC	10K OHM 1/16W	R7061	R803R9473J	RC	47K OHM 1/16W
R4255	R808R9472J	RC	4.7K OHM 1/16W	R7062	R803R9473J	RC	47K OHM 1/16W
R4256	R808R9102J	RC	1K OHM 1/16W	R7063	R803R9473J	RC	47K OHM 1/16W
R4257	R808R9334J	RC	330K OHM 1/16W	R7064	R803R9473J	RC	47K OHM 1/16W
R4259	R808R9683J	RC	68K OHM 1/16W	R7067	R002T4681J	RC	680 OHM 1/4W
R4260	R808R9103J	RC	10K OHM 1/16W	R7068	R002T4681J	RC	680 OHM 1/4W
R4263	R808R9153J	RC	15K OHM 1/16W	R7069	R002T4681J	RC	680 OHM 1/4W
R4265	R808R9102J	RC	1K OHM 1/16W	R7070	R002T4681J	RC	680 OHM 1/4W
R4266	R808R9102J	RC	1K OHM 1/16W	R7071	R002T4681J	RC	680 OHM 1/4W
R4267	R808R9330J	RC	33 OHM 1/16W	R7072	R002T4681J	RC	680 OHM 1/4W
R4311	R808R9472J	RC	4.7K OHM 1/16W	R7073	R002T4681J	RC	680 OHM 1/4W
R4312	R808R9472J	RC	4.7K OHM 1/16W	R7074	R002T4681J	RC	680 OHM 1/4W
R4316	R803R9153J	RC	15K OHM 1/16W	R7075	R002T4681J	RC	680 OHM 1/4W
R4317	R803R9153J	RC	15K OHM 1/16W	R7076	R002T4681J	RC	680 OHM 1/4W
R4318	R808R9682J	RC	6.8K OHM 1/16W	R7077	R002T4681J	RC	680 OHM 1/4W
R4319	R808R9682J	RC	6.8K OHM 1/16W	R7078	R002T4681J	RC	680 OHM 1/4W
R5801	R808R9121J	RC	120 OHM 1/16W	R7079	R002T4681J	RC	680 OHM 1/4W
R5802	R808R9200J	RC	20 OHM 1/16W	R7080	R002T4681J	RC	680 OHM 1/4W
R5803	R808R9470J	RC	47 OHM 1/16W	R7081	R002T4681J	RC	680 OHM 1/4W
R5812	R808R9222J	RC	2.2K OHM 1/16W	R7082	R002T4681J	RC	680 OHM 1/4W
R5814	R808R9332J	RC	3.3K OHM 1/16W	R7606	R803R9391J	RC	390 OHM 1/16W
R5815	R808R9332J	RC	3.3K OHM 1/16W	R7607	R803R9391J	RC	390 OHM 1/16W
R5817	R808R9682J	RC	6.8K OHM 1/16W	R8501	R808R9100J	RC	10 OHM 1/16W
R5818	R808R9101J	RC	100 OHM 1/16W	R8502	R808R9100J	RC	10 OHM 1/16W
R5819	R808R9220J	RC	22 OHM 1/16W	R8503	R808R9334J	RC	330K OHM 1/16W
R6207	R808R9103J	RC	10K OHM 1/16W	R8504	R808R9103J	RC	10K OHM 1/16W
R6208	R808R9472J	RC	4.7K OHM 1/16W	R8505	R808R9103J	RC	10K OHM 1/16W
R6501	R808R9101J	RC	100 OHM 1/16W	R8506	R808R9334J	RC	330K OHM 1/16W
R6502	R808R9101J	RC	100 OHM 1/16W	R8507	R808R9100J	RC	10 OHM 1/16W
R7002	R803R9102J	RC	1K OHM 1/16W	R8509	R808R9223J	RC	22K OHM 1/16W
R7003	R002T4102J	RC	1K OHM 1/4W	R8510	R808R9562J	RC	5.6K OHM 1/16W
R7006	R803R9154J	RC	150K OHM 1/16W	R8511	R808R9103J	RC	10K OHM 1/16W
R7008	R803R9113F	RC	11K OHM 1/16W	R8513	R808R9103J	RC	10K OHM 1/16W
R7009	R803R9564J	RC	560K OHM 1/16W	R8515	R808R9103J	RC	10K OHM 1/16W
R7010	R803R9182F	RC	1.8K OHM 1/16W	R8516	R808R9103J	RC	10K OHM 1/16W
R7011	R803R9681F	RC	680 OHM 1/16W	R8519	R808R9330J	RC	33 OHM 1/16W
R7014	R4K1T4472F	R,METAL	4.7K OHM 1/4W	R8522	R808R9223J	RC	22K OHM 1/16W
R7015	R4K1T4104F	R,METAL	100K OHM 1/4W	R8523	R808R9223J	RC	22K OHM 1/16W

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
RESISTORS				CAPACITORS			
R8525	R808R9221J	RC	220 OHM 1/16W	C2800	CS0UB0N15K	CC	0.1 UF 10V B
R8526	R808R9221J	RC	220 OHM 1/16W	C2801	CS0UB0N15K	CC	0.1 UF 10V B
R8527	R808R9103J	RC	10K OHM 1/16W	C2805	CS0UB0214K	CC	0.01 UF 16V B
R8531	R808R9103J	RC	10K OHM 1/16W	C2807	CS0UCH4K1J	CC	27 PF 50V CH
R8533	R808R9103J	RC	10K OHM 1/16W	C2808	CS0UCH4H1J	CC	22 PF 50V CH
R8534	R803R9330J	RC	33 OHM 1/16W	C2809	CS0UB0413K	CC	0.001 UF 50V B
R8535	R808R9103J	RC	10K OHM 1/16W	C2812	CS0UB0N15K	CC	0.1 UF 10V B
R8536	R808R9103J	RC	10K OHM 1/16W	C2813	CS0PB0N16K	CC	1 UF 10V B
R8538	R808R9562F	RC	5.6K OHM 1/16W	C2814	CS0PB0N16K	CC	1 UF 10V B
R8539	R808R9471F	RC	470 OHM 1/16W	C2815	CS0UB0N15K	CC	0.1 UF 10V B
R8540	R808R9472F	RC	4.7K OHM 1/16W	C2816	CS0UB0N15K	CC	0.1 UF 10V B
R8541	R803R9681J	RC	680 OHM 1/16W	C2817	CS0PB0N16K	CC	1 UF 10V B
R8542	R808R9100J	RC	10 OHM 1/16W	C2818	CS0UB0N15K	CC	0.1 UF 10V B
R8543	R808R9102J	RC	1K OHM 1/16W	C2819	CS0UB0N15K	CC	0.1 UF 10V B
R8544	R81ZR2R47J	RC	0.47 OHM 1/2W	C2820	CS0UB0N15K	CC	0.1 UF 10V B
CAPACITORS				C2821	CS0UB0N15K	CC	0.1 UF 10V B
C300	CS0UB0N15K	CC	0.1 UF 10V B	C2822	CS0PB0N16K	CC	1 UF 10V B
C301	CS0UB0N15K	CC	0.1 UF 10V B	C2823	CS0PB0N16K	CC	1 UF 10V B
C302	CS0UB0N15K	CC	0.1 UF 10V B	C2824	CS0PB0N16K	CC	1 UF 10V B
C304	CS0UB0413K	CC	0.001 UF 50V B	C2825	CS0UB0N15K	CC	0.1 UF 10V B
C305	CS0UB04Q3K	CC	0.0047UF 50V B	C2826	CS0UB0N15K	CC	0.1 UF 10V B
C306	CS0PB0315K	CC	0.1 UF 25V B	C2827	CS0UB0N15K	CC	0.1 UF 10V B
C307	CS0RB04Q5K	CC	0.47 UF 50V B	C2828	CS0UB0N15K	CC	0.1 UF 10V B
C308	CS0UCH4U2J	CC	680 PF 50V CH	C2829	CS0UB0N15K	CC	0.1 UF 10V B
C309	CS0PB0316K	CC	1 UF 25V B	C2830	CS0UB0N15K	CC	0.1 UF 10V B
C310	CS0PB0316K	CC	1 UF 25V B	C2831	CS0UB0N15K	CC	0.1 UF 10V B
C311	CS0PB0315K	CC	0.1 UF 25V B	C2833	CS0UB0214K	CC	0.01 UF 16V B
C312	CS0PB0315K	CC	0.1 UF 25V B	C2834	CS0UB0N15K	CC	0.1 UF 10V B
C313	E7EST3471M	CE	470 UF 25V	C2837	CS0UB0N15K	CC	0.1 UF 10V B
C315	CS0PB0315K	CC	0.1 UF 25V B	C2838	CS0UB0N15K	CC	0.1 UF 10V B
C316	CS0PB0315K	CC	0.1 UF 25V B	C2839	CS0UB0N15K	CC	0.1 UF 10V B
C317	CS0UB04L2K	CC	330 PF 50V B	C2841	CS0UB0N15K	CC	0.1 UF 10V B
C318	CS0UB04L2K	CC	330 PF 50V B	C2842	CS0UB0N15K	CC	0.1 UF 10V B
C319	CS0PB0415K	CC	0.1 UF 50V B	C2843	CS0UB0N15K	CC	0.1 UF 10V B
C320	CS0PB0415K	CC	0.1 UF 50V B	C2844	CS0UB0N15K	CC	0.1 UF 10V B
C321	CS0PB0415K	CC	0.1 UF 50V B	C2845	CS0UB0N15K	CC	0.1 UF 10V B
C322	CS0PB0415K	CC	0.1 UF 50V B	C2846	CS0UB0N15K	CC	0.1 UF 10V B
C323	CS0PB0415K	CC	0.1 UF 50V B	C2847	CS0UB0N15K	CC	0.1 UF 10V B
C324	CS0PB0415K	CC	0.1 UF 50V B	C2849	CS0UB0N15K	CC	0.1 UF 10V B
C325	CS0PB0415K	CC	0.1 UF 50V B	C2850	CS0UB0N15K	CC	0.1 UF 10V B
C326	CS0PB0415K	CC	0.1 UF 50V B	C2855	CS0UB0N15K	CC	0.1 UF 10V B
C327	CS0UB0413K	CC	0.001 UF 50V B	C2856	CS0UB0N15K	CC	0.1 UF 10V B
C328	CS0UB0413K	CC	0.001 UF 50V B	C2857	CS0UB0N15K	CC	0.1 UF 10V B
C329	CS0UB0413K	CC	0.001 UF 50V B	C2858	CS0UB0N15K	CC	0.1 UF 10V B
C330	CS0UB0413K	CC	0.001 UF 50V B	C2859	CS0UB0N15K	CC	0.1 UF 10V B
C331	CS0UB0413K	CC	0.001 UF 50V B	C2860	CS0RB0N17K	CC	10 UF 10V B
C332	CS0UB0413K	CC	0.001 UF 50V B	C2861	CS0UB0N15K	CC	0.1 UF 10V B
C333	CS0RB04Q5K	CC	0.47 UF 50V B	C2862	CS0UB0N15K	CC	0.1 UF 10V B
C335	CS0UCH4Q1J	CC	47 PF 50V CH	C2863	CS0UB0N15K	CC	0.1 UF 10V B
C336	CS0UCH4Q1J	CC	47 PF 50V CH	C2864	CS0UB0N16K	CC	1 UF 10V B
C2204	CS0RB0PH7M	CC	22 UF 6.3V B	C2865	CS0UB0N15K	CC	0.1 UF 10V B
C2205	CS0RB0PH7M	CC	22 UF 6.3V B	C2866	CS0UB0N15K	CC	0.1 UF 10V B
C2206	CS0PB0315K	CC	0.1 UF 25V B	C2867	CS0UB0N15K	CC	0.1 UF 10V B
C2207	CS0PB0315K	CC	0.1 UF 25V B	C2868	CS0UB0N15K	CC	0.1 UF 10V B
C2301	CS0UB0315K	CC	0.1 UF 25V B	C2869	CS0UB0N15K	CC	0.1 UF 10V B
C2303	CS0UB0315K	CC	0.1 UF 25V B	C2870	CS0UB0N15K	CC	0.1 UF 10V B
C2305	CS0UB0315K	CC	0.1 UF 25V B	C2871	CS0UB0N15K	CC	0.1 UF 10V B
C2306	E72BM2470M	CE	47 UF 16V	C2872	CS0UB0N15K	CC	0.1 UF 10V B
C2307	CS0UB0315K	CC	0.1 UF 25V B	C2873	CS0UB0N15K	CC	0.1 UF 10V B
C2308	CS0UCH4L1J	CC	33 PF 50V CH	C2874	CS0RB0N17K	CC	10 UF 10V B
C2309	CS0UCH412J	CC	100 PF 50V CH	C2875	CS0UB0N15K	CC	0.1 UF 10V B
C2310	CS0UB0413K	CC	0.001 UF 50V B	C2876	CS0UB0N15K	CC	0.1 UF 10V B
C2311	CS0UB0315K	CC	0.1 UF 25V B	C2877	CS0UB0N15K	CC	0.1 UF 10V B
C2312	CS0UCH4H2J	CC	220 PF 50V CH	C2878	CS0UB0214K	CC	0.01 UF 16V B
C2313	CS0UCH4H2J	CC	220 PF 50V CH	C2879	CS0UB0N15K	CC	0.1 UF 10V B
C2320	E72BM0470M	CE	47 UF 6.3V	C2880	CS0UB0N15K	CC	0.1 UF 10V B
C2321	E72BM0470M	CE	47 UF 6.3V	C2881	CS0UB0N15K	CC	0.1 UF 10V B
C2322	CS0PB03H5K	CC	0.22 UF 25V B	C2882	CS0UB0N15K	CC	0.1 UF 10V B
C2323	CS0PB03H5K	CC	0.22 UF 25V B	C2883	CS0UB0N15K	CC	0.1 UF 10V B
C2324	CS0UCH412J	CC	100 PF 50V CH	C2884	CS0UB0N15K	CC	0.1 UF 10V B
C2328	CS0UB0314K	CC	0.01 UF 25V B	C2885	CS0UB0N15K	CC	0.1 UF 10V B
C2330	CS0UCH412J	CC	100 PF 50V CH	C2886	CS0UB0N15K	CC	0.1 UF 10V B
C2332	CS0UCH411J	CC	10 PF 50V CH	C2887	CS0UB0NH5K	CC	0.22 UF 10V B
C2333	CS0UB0314K	CC	0.01 UF 25V B	C2888	CS0RB0N17K	CC	10 UF 10V B
C2334	CS0UCH412J	CC	100 PF 50V CH	C2891	CS0RB0N17K	CC	10 UF 10V B
C2335	CS0UCH412J	CC	100 PF 50V CH	C2894	CS0RB0N17K	CC	10 UF 10V B
C2336	CS0UB0315K	CC	0.1 UF 25V B	C2895	CS0UB0N15K	CC	0.1 UF 10V B

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
CAPACITORS				CAPACITORS			
C2897	CS0RB0N17K	CC	10 UF 10V B	C3095	CS0PB0NH6K	CC	2.2 UF 10V B
C2898	CS0PB0NH6K	CC	2.2 UF 10V B	C3096	CS0PB0NH6K	CC	2.2 UF 10V B
C2899	CS0PB0N16K	CC	1 UF 10V B	C3097	CS0SB0317K	CC	10 UF 25V B
C2901	CS0UB0N15K	CC	0.1 UF 10V B	C3099	CS0SB0317K	CC	10 UF 25V B
C2902	CS0RB0N17K	CC	10 UF 10V B	C3102	CS0PB0316K	CC	1 UF 25V B
C2903	CS0UB0413K	CC	0.001 UF 50V B	C3103	CS0PB0316K	CC	1 UF 25V B
C2904	CS0UB0413K	CC	0.001 UF 50V B	C3104	CS0PB0316K	CC	1 UF 25V B
C2905	CS0RB0N17K	CC	10 UF 10V B	C3601	CS0UB0N15K	CC	0.1 UF 10V B
C2906	CS0RB0N17K	CC	10 UF 10V B	C3602	CS0UB0N15K	CC	0.1 UF 10V B
C2907	CS0UB0N15K	CC	0.1 UF 10V B	C3603	CS0UB0N15K	CC	0.1 UF 10V B
C2910	CS0RB0PH7M	CC	22 UF 6.3V B	C3604	CS0UB0N15K	CC	0.1 UF 10V B
C2911	CS0RB0PH7M	CC	22 UF 6.3V B	C3605	CS0UB0N15K	CC	0.1 UF 10V B
C2912	CS0UB0N15K	CC	0.1 UF 10V B	C3607	CS0UB0N15K	CC	0.1 UF 10V B
C2915	CS0PB0N16K	CC	1 UF 10V B	C3608	CS0RB0P17K	CC	10 UF 6.3V B
C2916	CS0PB0N16K	CC	1 UF 10V B	C3610	CS0UB04Q3K	CC	0.0047UF 50V B
C2917	CS0RB0PH7M	CC	22 UF 6.3V B	C3611	CS0PB0NH6K	CC	2.2 UF 10V B
C2921	CS0RB0PH7M	CC	22 UF 6.3V B	C3612	CS0UB04H3K	CC	0.0022UF 50V B
C2924	CS0UB0N15K	CC	0.1 UF 10V B	C3613	CS0UB0214K	CC	0.01 UF 16V B
C2925	CS0UB0N15K	CC	0.1 UF 10V B	C3801	CS0PB0316K	CC	1 UF 25V B
C2965	CS0UCH4H1J	CC	22 PF 50V CH	C3802	CS0RB04Q5K	CC	0.47 UF 50V B
C2968	CS0UCH4H1J	CC	22 PF 50V CH	C3803	CS0RB0416K	CC	1 UF 50V B
C3000	CS0UB04E3K	CC	0.0015UF 50V B	C3804	CS0PB0413K	CC	0.001 UF 50V B
C3003	CS0RB0N17K	CC	10 UF 10V B	△C3805	E718HC391D	CE	390 UF 200V
C3004	CS0RB0N17K	CC	10 UF 10V B	C3806	CS0PB0415K	CC	0.1 UF 50V B
C3008	CS0UB0N16K	CC	1 UF 10V B	C3807	CS0PB04H3K	CC	0.0022UF 50V B
C3009	CS0RB0N17K	CC	10 UF 10V B	△C3808	P4K12D334K	CMPP	0.33 UF 310V
C3011	CS0PB0N16K	CC	1 UF 10V B	△C3809	CE39E0M13M	CC	0.001 UF 250V E
C3012	CS0UB0N15K	CC	0.1 UF 10V B	C3810	CS0PB03H5K	CC	0.22 UF 25V B
C3014	CS0RB0N17K	CC	10 UF 10V B	△C3811	CE39E0M13M	CC	0.001 UF 250V E
C3016	CS0RB02Q6K	CC	4.7 UF 16V B	△C3812	C234SL6E1J	CC	15 PF 1KV SL
C3017	CS0RB02Q6K	CC	4.7 UF 16V B	△C3813	P4K10D224K	CMPP	0.22 UF 310V LE-MX
C3034	CS0UCH412J	CC	100 PF 50V CH	C3814	CS0PB0414K	CC	0.01 UF 50V B
C3040	CS0RB0N17K	CC	10 UF 10V B	C3815	CS3RB03H6K	CC	2.2 UF 25V B
C3041	CS0UB0N16K	CC	1 UF 10V B	C3817	CS0PB0415K	CC	0.1 UF 50V B
C3042	CS0UB04L3K	CC	0.0033UF 50V B	C3818	CS0PB0413K	CC	0.001 UF 50V B
C3043	CS0UB03Q4K	CC	0.047 UF 25V B	C3819	E8E2U5100D	CE	10 UF 50V
C3044	CS0UB04Q3K	CC	0.0047UF 50V B	C3820	E8E2U5100D	CE	10 UF 50V
C3046	CS0UB0413K	CC	0.001 UF 50V B	C3821	E8E2U5100D	CE	10 UF 50V
C3047	CS0UB0413K	CC	0.001 UF 50V B	C3822	CS0RB0416K	CC	1 UF 50V B
C3048	CS0UB0413K	CC	0.001 UF 50V B	△C3823	E8E101102M	CE	1000 UF 10V
C3049	CS0UB0414K	CC	0.01 UF 50V B	C3824	CS0PB0414K	CC	0.01 UF 50V B
C3050	CS0UCH4E2J	CC	150 PF 50V CH	△C3825	E8E6FC470M	CE	47 UF 200V
C3051	CS0RB02Q6K	CC	4.7 UF 16V B	C3826	CS0PB0315K	CC	0.1 UF 25V B
C3052	CS0UB04L3K	CC	0.0033UF 50V B	C3827	CS3RB03H6K	CC	2.2 UF 25V B
C3053	CS0UB0414K	CC	0.01 UF 50V B	C3828	CS3RB0316K	CC	1 UF 25V B
C3055	CS0PB0414K	CC	0.01 UF 50V B	C3830	CS0PB0415K	CC	0.1 UF 50V B
C3056	CS0UB0414K	CC	0.01 UF 50V B	C3831	CS0PB04H4K	CC	0.022 UF 50V B
C3057	CS0PB0316K	CC	1 UF 25V B	C3832	C0340R6Q2K	CC	470 PF 1KV R
C3058	CS0PB0316K	CC	1 UF 25V B	C3833	C0340R613K	CC	0.001 UF 1KV R
C3059	CS0RB02Q6K	CC	4.7 UF 16V B	C3834	CS0PB0414K	CC	0.01 UF 50V B
C3060	CS0PB0316K	CC	1 UF 25V B	C3835	E7EYU1221M	CE	220 UF 10V
C3061	CS0RB0217K	CC	10 UF 16V B	C3837	P4NBE5104H	CMPP	0.1 UF 630V FGSM
C3064	CS0PB0PQ6K	CC	4.7 UF 6.3V B	△C3840	CE39E0MH2K	CC	220 PF 250V E
C3065	CS0RB02Q6K	CC	4.7 UF 16V B	C3841	E8E2U5470D	CE	47 UF 50V
C3066	CS0UB0N15K	CC	0.1 UF 10V B	△C3843	CE39E0MH2K	CC	220 PF 250V E
C3067	CS0SB0317K	CC	10 UF 25V B	C3844	CS0PB0315K	CC	0.1 UF 25V B
C3069	CS0PB0315K	CC	0.1 UF 25V B	C3845	CS0PCB0412J	CC	100 PF 50V CH
C3070	CS0RB0217K	CC	10 UF 16V B	C3846	CS0PB0415K	CC	0.1 UF 50V B
C3071	CS0RB0217K	CC	10 UF 16V B	C3847	CS0PB0315K	CC	0.1 UF 25V B
C3072	CS0RB0217K	CC	10 UF 16V B	△C3848	E9E8T2471M	CE	470 UF 16V
C3073	CS0RB0217K	CC	10 UF 16V B	△C3849	E8E1T3471M	CE	470 UF 25V
C3074	CS0RB0PH7M	CC	22 UF 6.3V B	△C3851	E7EYF4471M	CE	470 UF 35V
C3075	CS0RB0PH7M	CC	22 UF 6.3V B	C3853	E8E173182M	CE	1800 UF 25V
C3076	CS0RB0PH7M	CC	22 UF 6.3V B	C3856	C0PLRR713K	CC	0.001 UF 2KV R
C3077	CS0RB0PH7M	CC	22 UF 6.3V B	C4001	CS0UB0N15K	CC	0.1 UF 10V B
C3078	CS0RB0217K	CC	10 UF 16V B	C4003	CS0UB0N15K	CC	0.1 UF 10V B
C3079	CS0SB04H6K	CC	2.2 UF 50V B	C4005	CS0UB0N15K	CC	0.1 UF 10V B
C3080	CS0SB04H6K	CC	2.2 UF 50V B	C4006	CS0UB0P16K	CC	1 UF 6.3V B
C3081	CS0UB0414K	CC	0.01 UF 50V B	C4007	CS0UB0N15K	CC	0.1 UF 10V B
C3082	CS0UB0414K	CC	0.01 UF 50V B	C4008	CS0UB0N15K	CC	0.1 UF 10V B
C3083	CS0PB0NH6K	CC	2.2 UF 10V B	C4012	CS0UCH412J	CC	100 PF 50V CH
C3085	CS0PB0N16K	CC	1 UF 10V B	C4015	E72BM0101M	CE	100 UF 6.3V
C3086	CS0RB0N17K	CC	10 UF 10V B	C4016	E72BM0101M	CE	100 UF 6.3V
C3087	CS0UB0414K	CC	0.01 UF 50V B	C4019	CS0RB0PQ6K	CC	4.7 UF 6.3V B
C3090	CS0UB0N15K	CC	0.1 UF 10V B	C4020	CS0UB0N15K	CC	0.1 UF 10V B
C3093	CS0RB0N17K	CC	10 UF 10V B	C4023	CS0UB0N15K	CC	0.1 UF 10V B
C3094	CS0PB0N16K	CC	1 UF 10V B	C4029	CS0UB0N15K	CC	0.1 UF 10V B

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
CAPACITORS				CAPACITORS			
C4033	CS0UCH4K1J	CC	27 PF 50V CH	C5830	CS0UB0N16K	CC	1 UF 10V B
C4036	CS0UB0N15K	CC	0.1 UF 10V B	C5832	CS0UB0215K	CC	0.1 UF 16V B
C4037	CS0UCH4K1J	CC	27 PF 50V CH	C5844	CS0UB0214K	CC	0.01 UF 16V B
C4038	CS0UB0N15K	CC	0.1 UF 10V B	C5846	CS0UB0215K	CC	0.1 UF 16V B
C4043	CS0UB0314K	CC	0.01 UF 25V B	C5848	CS0UB04Q3K	CC	0.0047UF 50V B
C4044	E72BM0220M	CE	22 UF 6.3V	C5849	CS0UB04Q3K	CC	0.0047UF 50V B
C4045	CS0UB03U3K	CC	0.0068UF 25V B	C6201	CS0UB0215K	CC	0.1 UF 16V B
C4047	E72BM0101M	CE	100 UF 6.3V	C6202	CS0UB0215K	CC	0.1 UF 16V B
C4048	CS0UB0N15K	CC	0.1 UF 10V B	C6210	CS0UB0P14K	CC	0.01 UF 6.3V B
C4049	CS0UB0N15K	CC	0.1 UF 10V B	C6211	CS0UB03H4K	CC	0.022 UF 25V B
C4050	E72BM0101M	CE	100 UF 6.3V	C6213	CS0PB0N16K	CC	1 UF 10V B
C4051	E72BM0101M	CE	100 UF 6.3V	C6509	CS0UB0N16K	CC	1 UF 10V B
C4052	CS0UB0N15K	CC	0.1 UF 10V B	C7004	CS0PB0414K	CC	0.01 UF 50V B
C4053	CS0UB0314K	CC	0.01 UF 25V B	C7005	CS0PB04Q3K	CC	0.0047UF 50V B
C4054	CS0UB0314K	CC	0.01 UF 25V B	C7006	CS0PB0NH6K	CC	2.2 UF 10V B
C4055	CS0UB0N15K	CC	0.1 UF 10V B	C7007	CS0PB0414K	CC	0.01 UF 50V B
C4056	E72BM0101M	CE	100 UF 6.3V	C7008	CS0PB0415K	CC	0.1 UF 50V B
C4057	CS0UB0413K	CC	0.001 UF 50V B	C7009	CS0PB03H5K	CC	0.22 UF 25V B
C4058	CS0UB0N15K	CC	0.1 UF 10V B	C7010	CS0PB04Q3K	CC	0.0047UF 50V B
C4059	CS0UB04E3K	CC	0.0015UF 50V B	C7011	CS0PB04Q3K	CC	0.0047UF 50V B
C4060	CS0UB0413K	CC	0.001 UF 50V B	C7012	CS0PB03H5K	CC	0.22 UF 25V B
C4062	CS0UB0N15K	CC	0.1 UF 10V B	C7013	CS0PCCH4H2J	CC	220 PF 50V CH
C4063	CS0UB0N15K	CC	0.1 UF 10V B	C7014	CS0PB0414K	CC	0.01 UF 50V B
C4064	CS0UB0N15K	CC	0.1 UF 10V B	C7015	CS0PB0N16K	CC	1 UF 10V B
C4066	CS0UB0P16K	CC	1 UF 6.3V B	C7016	CS0PB0414K	CC	0.01 UF 50V B
C4071	CS0UB0413K	CC	0.001 UF 50V B	C7017	CS0PB0414K	CC	0.01 UF 50V B
C4073	CS0UB0N15K	CC	0.1 UF 10V B	C7018	CS0PB03Q4K	CC	0.047 UF 25V B
C4074	CS0UB0N15K	CC	0.1 UF 10V B	C7019	CS0PB0315K	CC	0.1 UF 25V B
C4088	CS0UCH4H2J	CC	220 PF 50V CH	C7020	E7EYF4102M	CE	1000 UF 35V
C4089	CS0UB03E4K	CC	0.015 UF 25V B	C7021	CS0PB0413K	CC	0.001 UF 50V B
C4090	CS0UB0N15K	CC	0.1 UF 10V B	C7022	CS0PB0415K	CC	0.1 UF 50V B
C4101	CS0UCH4L2J	CC	330 PF 50V CH	C7027	CS0PCCH4H2J	CC	220 PF 50V CH
C4102	CS0UCH4L2J	CC	330 PF 50V CH	C7028	CS0PCCH4H2J	CC	220 PF 50V CH
C4122	CS0UCH412J	CC	100 PF 50V CH	C7029	CS0PCCH4H2J	CC	220 PF 50V CH
C4123	CS0UCH412J	CC	100 PF 50V CH	C7031	CS0PCCH4H2J	CC	220 PF 50V CH
C4200	CS0UCH412J	CC	100 PF 50V CH	C7032	CS0PCCH4H2J	CC	220 PF 50V CH
C4201	CS0UB0N15K	CC	0.1 UF 10V B	C7033	CS0PCCH4H2J	CC	220 PF 50V CH
C4202	CS0UB0N15K	CC	0.1 UF 10V B	C7034	CS0PCCH4H2J	CC	220 PF 50V CH
C4212	CS0UB0215K	CC	0.1 UF 16V B	C7035	CS0SB0417M	CC	10 UF 50V B
C4217	CS0UB0N15K	CC	0.1 UF 10V B	C7036	CS0SB0417M	CC	10 UF 50V B
C4219	CS0UCH412J	CC	100 PF 50V CH	C7046	CS0SB0417M	CC	10 UF 50V B
C4220	CS0UB0N15K	CC	0.1 UF 10V B	C7047	CS0SB0417M	CC	10 UF 50V B
C4221	CS0UB0N16K	CC	1 UF 10V B	C7049	CRGTB0413K	CC	0.001 UF 50V B
C4222	CS0UB0N15K	CC	0.1 UF 10V B	C7050	CRGTB0413K	CC	0.001 UF 50V B
C4223	CS0UCH412J	CC	100 PF 50V CH	C7051	CRGTB0413K	CC	0.001 UF 50V B
C4224	CS0UCH4Q1J	CC	47 PF 50V CH	C7052	CRGTB0413K	CC	0.001 UF 50V B
C4229	CS0RB0N17K	CC	10 UF 10V B	C7053	CRGTB0413K	CC	0.001 UF 50V B
C4235	CS0UCH4Q1J	CC	47 PF 50V CH	C7054	CRGTB0413K	CC	0.001 UF 50V B
C4236	CS0UCH4Q1J	CC	47 PF 50V CH	C7055	CRGTB0413K	CC	0.001 UF 50V B
C4237	CS0UCH4Q1J	CC	47 PF 50V CH	C7056	CRGTB0413K	CC	0.001 UF 50V B
C4241	CS0UCH4Q1J	CC	47 PF 50V CH	C7057	C234SLB11J	CC	10 PF 6KV SL
C4242	CS0UCH412J	CC	100 PF 50V CH	C7058	C234SLB11J	CC	10 PF 6KV SL
C4243	CS0UCH412J	CC	100 PF 50V CH	C7059	C234SLB11J	CC	10 PF 6KV SL
C4249	CS0UCH412J	CC	100 PF 50V CH	C7060	C234SLB11J	CC	10 PF 6KV SL
C4250	CS0UCH412J	CC	100 PF 50V CH	C7061	C234SLB11J	CC	10 PF 6KV SL
C4251	CS0RB0N17K	CC	10 UF 10V B	C7062	C234SLB11J	CC	10 PF 6KV SL
C4252	CS0RB0N17K	CC	10 UF 10V B	C7063	C234SLB11J	CC	10 PF 6KV SL
C4253	CS0RB0N17K	CC	10 UF 10V B	C7064	C234SLB11J	CC	10 PF 6KV SL
C4255	CS0RB0216K	CC	1 UF 16V B	C8056	CS0UCH4S2J	CC	560 PF 50V CH
C4256	E70QU2470M	CE	47 UF 16V	C8501	CS0RB0PQ6K	CC	4.7 UF 6.3V B
C4257	CS0RB0216K	CC	1 UF 16V B	C8504	CS0UCH412J	CC	100 PF 50V CH
C4258	E70QU2470M	CE	47 UF 16V	C8507	CS0UCH4S2J	CC	560 PF 50V CH
C4262	CS0PB0N16K	CC	1 UF 10V B	C8511	CS0UB0N15K	CC	0.1 UF 10V B
C5801	CS0RB0N17K	CC	10 UF 10V B	C8512	CS0UB0N15K	CC	0.1 UF 10V B
C5802	CS0RB0N17K	CC	10 UF 10V B	C8513	E72BM2100M	CE	10 UF 16V
C5803	CS0UB0413K	CC	0.001 UF 50V B	C8514	CS0UCH412J	CC	100 PF 50V CH
C5804	CS0RB0N17K	CC	10 UF 10V B	C8516	CS0UCH412J	CC	100 PF 50V CH
C5805	CS0RB0N17K	CC	10 UF 10V B	C8517	CS0UCH4U1J	CC	68 PF 50V CH
C5810	CS0UB0215K	CC	0.1 UF 16V B	C8518	CS0UCH4U1J	CC	68 PF 50V CH
C5812	CS0UB0413K	CC	0.001 UF 50V B	C8519	E72BM2100M	CE	10 UF 16V
C5814	CS0UB0215K	CC	0.1 UF 16V B	C8520	CS0UB0314K	CC	0.01 UF 25V B
C5815	CS0UB0N16K	CC	1 UF 10V B	C8521	CS0RB0N17K	CC	10 UF 10V B
C5817	CS0UB0N16K	CC	1 UF 10V B	C8522	CS0RB0N17K	CC	10 UF 10V B
C5822	CS0UB0N16K	CC	1 UF 10V B	C8523	CS0RB0N17K	CC	10 UF 10V B
C5823	CS0UB0N16K	CC	1 UF 10V B	C8524	CS0UCH412J	CC	100 PF 50V CH
C5827	CS0UB0N16K	CC	1 UF 10V B	C8525	CS0UCH412J	CC	100 PF 50V CH
C5828	CS0PCK410C	CC	1 PF 50V CK	C8529	CS0UB0314K	CC	0.01 UF 25V B

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
CAPACITORS				DIODES			
C8530	CS0UB0314K	CC	0.01 UF 25V B	D7027	D1VT001330	DIODE,SILICON	1SS133T-77
C8531	CS0UB0414K	CC	0.01 UF 50V B	D7028	D1VT001330	DIODE,SILICON	1SS133T-77
C8532	CS0UB0N15K	CC	0.1 UF 10V B	D7029	D1VT001330	DIODE,SILICON	1SS133T-77
C8533	CS0RB0N17K	CC	10 UF 10V B	D7030	D1VT001330	DIODE,SILICON	1SS133T-77
C8534	CS0UCH412J	CC	100 PF 50V CH	D7031	D1VT001330	DIODE,SILICON	1SS133T-77
C8536	CS0UB0315K	CC	0.1 UF 25V B	D7032	D1VT001330	DIODE,SILICON	1SS133T-77
C8539	CS0UB0315K	CC	0.1 UF 25V B	D7033	D1VT001330	DIODE,SILICON	1SS133T-77
C8540	CS0RB0PQ6K	CC	4.7 UF 6.3V B	D7034	D1VT001330	DIODE,SILICON	1SS133T-77
DIODES				D7035	D1VT001330	DIODE,SILICON	1SS133T-77
D2201	0021E9Q010	LED	LTL-1BEFJ-002A	D7036	D1VT001330	DIODE,SILICON	1SS133T-77
D2301	DD1R0100L0	DIODE SILICON	DA2J10100L	D8501	DEBRB5R1B2	DIODE ZENER	RKZ5.1B2KG
D2302	DD1R0100L0	DIODE SILICON	DA2J10100L	D8502	D28R11FS40	DIODE SCHOTTKY	EC11FS4-TE12L
D2801	D61R0V8001	DIODE VARISTA	EZZJ0V80010	D8503	D28R11FS40	DIODE SCHOTTKY	EC11FS4-TE12L
D3000	DD7R051VA0	DIODE SCHOTTKY BARRIER	RSX051VA-30	ICS			
D3002	D27RB056L0	DIODE SCHOTTKY	RB056L-40TE25	△IC301	I0WFP13TR0	_SOUND AMP 2'20W	STA333W13TR
D3003	D27RB056L0	DIODE SCHOTTKY	RB056L-40TE25	△IC2301	I1UFP5888S	5CH MOTOR DRIVER IC	SA5888TR
D3005	DD7RB055L0	DIODE SCHOTTKY BARRIER	RB055L-30	IC2801	I56M069830	SCALER C8	R8A66983BG-U0
D3006	DD7RB055L0	DIODE SCHOTTKY BARRIER	RB055L-30	IC2802	IG2J08B16E	512M BIT(32M*16)DDRII SDRAM	EM68B16CWPA-25H
D3007	D27RB056L0	DIODE SCHOTTKY	RB056L-40TE25	IC2803	S57R01HE01	MEMORY DATA EEPROM SOP8 32K	FT24C32A-USR-T
D3009	DC5PD40051	DIODE	HN2S02JE(TE85L,F)	IC2804	----	MEMORY DATA 32M BIT FLASH TSOP8	EN25Q32B-104HIP
D3010	DD1R0100L0	DIODE SILICON	DA2J10100L	IC2805	I1JN062050	500MA HIGH SIDE SW	MP6205DD-LF-Z
D3011	DD7R0S3550	DIODE SILICON	1SS355 TE-17	IC2806	I55J0052A0	DUAL 4CH ANALOG MULTIPLEXER	TC74VHC4052AFTELKM
D3012	DC5PD40051	DIODE	HN2S02JE(TE85L,F)	△IC3000	I1ZF9K2510	REGULATOR 2.5V	RP131K251D-TR
D3014	DC5PD40051	DIODE	HN2S02JE(TE85L,F)	△IC3002	I1ZF9110D0	VO-11V REG	R1190H110D-T1-F
D3015	D27RB056L0	DIODE SCHOTTKY	RB056L-40TE25	△IC3003	ILNJ990250	REGULATOR 1.8V	RT9025-18GSP
D3617	DD1R0100L0	DIODE SILICON	DA2J10100L	△IC3004	I1ZF9K5010	REGULATOR 5.0V	RP131K501D-TR
D3619	DD1R0100L0	DIODE SILICON	DA2J10100L	△IC3005	I1ZF9K3310	REGULATOR 3.3V	RP131K331D-TR
D3628	DD1R0100L0	DIODE SILICON	DA2J10100L	IC3007	I1SN030560	DC/DC CONVERTOR	THV3056
△D3803	D2Z05SB800	DIODE,BRIDGE	D5SB80	△IC3008	I1KF9431B0	VARIABLE SHUNT REGULATOR TAPE	KIA431BF
△D3804	D7KE101720	DIODE VARISTA	S10K175E2S5M4	△IC3009	I1ZF9121D0	REGULATOR 1.2V	RP131H121D-T1-F
D3805	DBJUA30012	DIODE ZENER	HZS30NB2	IC3601	I1LUK066330	HDMI SW	IT6633E-P
△D3807	D4CTN40060	DIODE SILICON	1N4006-A5	△IC3801	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
△D3808	D4CTN40060	DIODE SILICON	1N4006-A5	△IC3802	I16D052030	CURRENT RESONANT CTL IC	MCZ5203NA-7101
D3809	D27RB056L0	DIODE SCHOTTKY	RB056L-40TE25	△IC3803	I5SDP2M40	VDSS=700V F=67KHZ	MIP2M40MSSCF
D3810	D4CT01H6A0	DIODE RECTIFIER	1H6-A2	△IC3804	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
△D3811	D4CTN40060	DIODE SILICON	1N4006-A5	△IC3805	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
D3812	DE7RB1502B	DIODE ZENER	UDZSNP15B TE-17	△IC3806	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
D3813	DBJUA15012	DIODE ZENER	HZS15NB2	△IC3809	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
D3814	D27RB056L0	DIODE SCHOTTKY	RB056L-40TE25	IC4001	IC8K0389K0	DVD MPEG 128PIN MEDIATEK	MT1389QE/K-L
D3815	DBJUA30012	DIODE ZENER	HZS30NB2	IC4004	----	MEMORY DATA FLASH ROM(8M) EN25Q80A-100HI	EN25Q80A-100HIP
D3816	DBJUA33012	DIODE ZENER	HZS33NB2	IC4005	IG2J08165G	SDRAM(64M)EM63816STS-6G(70NM)	EM63816STS-6G(70NM)
△D3817	DK1T2D1400	POWER CLAMPER	ST02D-140	IC4201	IC7C9292A0	RESET IC 2.9V DELAY NCH SC-88	R3112Q292A-TR-FE
△D3818	D4JX001F50	DIODE SILICON	1F5	IC4202	IC7C9292A0	RESET IC 2.9V DELAY NCH SC-88	R3112Q292A-TR-FE
D3820	D4JX001F50	DIODE SILICON	1F5	△IC5801	I1ZF9K3310	REGULATOR 3.3V	RP131K331D-TR
△D3821	D28A10A061	DIODE SCHOTTKY BARRIER	FCQS10A065	△IC5802	I1ZF9K1810	REGULATOR 1.8V	RP131K181D-TR
△D3822	D28A10A080	DIODE SCHOTTKY BARRIER	FCHS10A08	IC5803	ILVN003010	WW RF SI-TUNER	MXL301RF
△D3823	DGERMA1110	DIODE SILICON	MA111-(TX)	IC6201	IC7C0292C0	RESET IC 2.9V CMOSL" SC-88A "	R3111Q292C-TR-FE
△D3824	D2AA045CT0	DIODE SCHOTTKY BARRIER	MFR1045CT	IC6502	I55F0A53FU	A/V SW 2IN 1OUT	TC7PA53FU(T5L,F,T)
D3825	DE7RB8R22B	DIODE ZENER	UDZSNP8.2B TE-17	△IC7001	I1EF099720	26WLCD INVERTER CONTROL IC	OZ9972ASN-A1-2-TR
D3826	DBJUA30012	DIODE ZENER	HZS30NB2	IC8501	IL4J045580	AUDIO OPE-AMP SOP8	AZ4558C
D4001	DD1R0100L0	DIODE SILICON	DA2J10100L	△IC8502	I1ZF981D50	REGULATOR 1.8V	RP131H181D5-T1-F
D5801	D61R0V8001	DIODE VARISTA	EZZJ0V80010	△IC8503	I1ZF9331D0	REGULATOR 3.3V	RP131H331D-T1-F
TRANSISTORS				TRANSISTORS			
D6206	DGERMA1110	DIODE SILICON	MA111-(TX)	Q2301	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
D7001	DD1R0100L0	DIODE SILICON	DA2J10100L	Q2302	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
D7002	DD1R0100L0	DIODE SILICON	DA2J10100L	Q2303	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
D7003	D1VT001330	DIODE,SILICON	1SS133T-77	Q2304	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
D7004	D1VT001330	DIODE,SILICON	1SS133T-77	Q2305	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
D7005	D1VT001330	DIODE,SILICON	1SS133T-77	Q2801	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
D7006	D1VT001330	DIODE,SILICON	1SS133T-77	Q2802	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
D7007	D1VT001330	DIODE,SILICON	1SS133T-77	Q2808	TJ5A104TU0	FET	SSM3K104TU(T5L,T)
D7008	D1VT001330	DIODE,SILICON	1SS133T-77	Q3000	TJRA12AU10	FET	INK0012AU1
D7009	D1VT001330	DIODE,SILICON	1SS133T-77	Q3001	TJRA12AU10	FET	INK0012AU1
D7010	D1VT001330	DIODE,SILICON	1SS133T-77	Q3002	TNRAB05004	COMPOUND TRANSISTOR	RT1N141C-T112-1
D7013	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3005	TNRAB05004	COMPOUND TRANSISTOR	RT1N141C-T112-1
D7014	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3014	TJ5A104TU0	FET	SSM3K104TU(T5L,T)
D7015	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3015	TJRA12AU10	FET	INK0012AU1
D7017	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3016	T8RA030520	TRANSISTOR SILICON	2SC3052-T1
D7018	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3017	TJ5MC61100	FET	TPC6110(TE85L,F,M)
D7019	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3020	TJ5MC61100	FET	TPC6110(TE85L,F,M)
D7020	DD1R0100L0	DIODE SILICON	DA2J10100L	Q3021	TJ5A104TU0	FET	SSM3K104TU(T5L,T)
D7021	D1VT001330	DIODE,SILICON	1SS133T-77	Q3022	TJRA12AU10	FET	INK0012AU1
D7022	D1VT001330	DIODE,SILICON	1SS133T-77	Q3608	TJRA12AU10	FET	INK0012AU1
D7023	D1VT001330	DIODE,SILICON	1SS133T-77	Q3609	TJRA12AU10	FET	INK0012AU1
D7024	D1VT001330	DIODE,SILICON	1SS133T-77	△Q3801	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
D7025	D1VT001330	DIODE,SILICON	1SS133T-77	Q3802	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
D7026	D1VT001330	DIODE,SILICON	1SS133T-77	Q3803	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
<b>TRANSISTORS</b>				<b>SWITCHES</b>			
Q3804	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK	SW2203	0504101T34	SWITCH,TACT	EVQ21505R
△Q3805	TJX06NF250	FET	STF16NF25	SW2204	0504101T34	SWITCH,TACT	EVQ21505R
△Q3806	TJX06NF250	FET	STF16NF25	SW2205	0504101T34	SWITCH,TACT	EVQ21505R
Q3807	T27T030190	FET	2SK3019_TL	SW2206	0504101T34	SWITCH,TACT	EVQ21505R
Q4200	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	SW2207	0504101T34	SWITCH,TACT	EVQ21505R
Q4201	TPRAC05003	COMPOUND TRANSISTOR	RT1P241C-T112-1	SW2208	0504101T34	SWITCH,TACT	EVQ21505R
Q4202	T8RA030520	TRANSISTOR SILICON	2SC3052-T1	<b>P.C.BOARD ASSEMBLIES</b>			
Q4203	TJRA12AU10	FET	INK0012AU1	PCB130	A57R01H130	DVD MT PCB ASS'Y	DMK135A
Q4204	TJRA12AU10	FET	INK0012AU1	PCB240	A57R01H240	POWER PCB ASS'Y	CEK671A
Q4205	TNRAB05004	COMPOUND TRANSISTOR	RT1N141C-T112-1	PCB270	A57R01H270	OPERATION PCB ASS'Y	CEK672A
Q4206	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	PCBDA0	A57R01HDA0	REMOCON PCB ASS'Y	CEK673A
Q4207	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	PCBF40	A57R01HF40	MAIN PCB ASS'Y	CML222A
<b>MISCELLANEOUS</b>							
Q4208	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B300	024HC51216	CORE,BEADS	HCB1608KF-121T20
Q4209	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B301	024HC51216	CORE,BEADS	HCB1608KF-121T20
Q4210	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK	B302	024HC13914	CORE,BEADS	HCB3216KF-391T20
Q4211	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B303	024HC13914	CORE,BEADS	HCB3216KF-391T20
Q4212	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B304	024HC13914	CORE,BEADS	HCB3216KF-391T20
Q4302	TJRA12AU10	FET	INK0012AU1	B305	024HC13914	CORE,BEADS	HCB3216KF-391T20
Q4303	TJRA12AU10	FET	INK0012AU1	B308	024HC51023	CORE,BEADS	FCM1608KF-102T02
Q6203	TPRAC05003	COMPOUND TRANSISTOR	RT1P241C-T112-1	B309	024HC51023	CORE,BEADS	FCM1608KF-102T02
Q6204	TPRAC05003	COMPOUND TRANSISTOR	RT1P241C-T112-1	B310	024HC51023	CORE,BEADS	FCM1608KF-102T02
Q6205	TNRAB05004	COMPOUND TRANSISTOR	RT1N141C-T112-1	B311	024HC51023	CORE,BEADS	FCM1608KF-102T02
Q7001	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B2305	024HC56013	CORE,BEADS	FCM1608KF-601T02
Q7002	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B2306	024HC56013	CORE,BEADS	FCM1608KF-601T02
△Q7003	T2W0037020	FET	2SK3702JS	B2800	024HC51216	CORE,BEADS	HCB1608KF-121T20
△Q7004	T2W0037020	FET	2SK3702JS	B2801	024NC52211	CORE,BEADS	EBMS160808A221_0.6A
△Q7005	T2W0037020	FET	2SK3702JS	B2802	024HC52213	CORE,BEADS	FCM1608KF-221T05
△Q7006	T2W0037020	FET	2SK3702JS	B2803	024AC3600P	CORE,BEADS	BLM21PG600SN1D
Q8503	TJ5AJ325F0	FET	SSM3J325F	B2806	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8504	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1	B2807	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8506	T27T035410	FET	2SK3541_T2L	B2808	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8507	T27T035410	FET	2SK3541_T2L	B2809	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8508	TJ5AJ325F0	FET	SSM3J325F	B2810	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8509	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1	B2811	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8510	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B2812	024HC52216	CORE,BEADS	HCB1608KF-221T20
△Q8511	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P	B2813	024HC52216	CORE,BEADS	HCB1608KF-221T20
Q8512	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	B2815	024HC51216	CORE,BEADS	HCB1608KF-121T20
<b>COILS &amp; TRANSFORMERS</b>				B3000	024HC51816	CORE,BEADS	HCB1608KF-181T20
L300	02167E220K	COIL	22_UH	B3003	024HC51816	CORE,BEADS	HCB1608KF-181T20
L301	02167E220K	COIL	22_UH	B3004	024BC5121J	CORE,BEADS	BLM18PG121SN1D
L302	02167E220K	COIL	22_UH	B3008	024HC51216	CORE,BEADS	HCB1608KF-121T20
L303	02167E220K	COIL	22_UH	B3012	024HC51816	CORE,BEADS	HCB1608KF-181T20
L2801	02DA000124	COIL CHOKE	DLP11SN900HL2L	B3601	024HC52216	CORE,BEADS	HCB1608KF-221T20
L3000	021YM64R7P	COIL	4.7_UH	B3801	024AC1121G	CORE,BEADS	BLM31PG121SN1L
L3003	021YM6100P	COIL	10_UH	B3802	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
L3004	021YEM6R4M	COIL	6.4_UH	B4003	024HC51023	CORE,BEADS	FCM1608KF-102T02
L3601	02D1000119	COIL CHOKE	EXC28CG900U	B4007	024AC5221F	CORE,BEADS	BLM18BD221SN1D
L3602	02D1000119	COIL CHOKE	EXC28CG900U	B4008	024HC51023	CORE,BEADS	FCM1608KF-102T02
L3603	02D1000119	COIL CHOKE	EXC28CG900U	B4010	024HC51023	CORE,BEADS	FCM1608KF-102T02
L3604	02D1000119	COIL CHOKE	EXC28CG900U	B4012	024HC51023	CORE,BEADS	FCM1608KF-102T02
△L3801	029B000186	COIL,LINE FILTER	JLB28121	B4202	024HC51023	CORE,BEADS	FCM1608KF-102T02
L3803	02167E100K	COIL	10_UH	B4203	024HC51023	CORE,BEADS	FCM1608KF-102T02
L5807	021AML5N6E	COIL	0.0056UH	B4205	024HC51216	CORE,BEADS	HCB1608KF-121T20
L5808	021AMK3N6C	COIL	0.0036UH	B5802	024HC51216	CORE,BEADS	HCB1608KF-121T20
L5809	021AML33NJ	COIL	0.033_UH	B5803	024HC51216	CORE,BEADS	HCB1608KF-121T20
L5810	021AMLR12J	COIL	0.12_UH	B5804	024HC51216	CORE,BEADS	HCB1608KF-121T20
L8501	021ES11R8K	COIL	1.8_UH	B5805	024HC51216	CORE,BEADS	HCB1608KF-121T20
△T3801	048728001H	TRANSFORMER,SWITCHING	8728001H	B5806	024HC51216	CORE,BEADS	HCB1608KF-121T20
△T3802	0481190201	TRANSFORMER,SWITCHING	81190201	B5808	024HC51216	CORE,BEADS	HCB1608KF-121T20
△T7001	0481330231	TRANSFORMER,SWITCHING	ETJV23ZG35AC	B5809	024HC51216	CORE,BEADS	HCB1608KF-121T20
△T7002	0481330231	TRANSFORMER,SWITCHING	ETJV23ZG35AC	B6201	024HC51216	CORE,BEADS	HCB1608KF-121T20
△T7003	0481330231	TRANSFORMER,SWITCHING	ETJV23ZG35AC	B6202	024HC51216	CORE,BEADS	HCB1608KF-121T20
△T7004	0481330231	TRANSFORMER,SWITCHING	ETJV23ZG35AC	B6203	024HC51216	CORE,BEADS	HCB1608KF-121T20
<b>JACKS</b>				B6205	024HC51216	CORE,BEADS	HCB1608KF-121T20
△J3801	064Q1A0017	JACK,AC	CCT2302-0973FC	B6502	024HC52216	CORE,BEADS	HCB1608KF-221T20
J4200	060K421056	RCA JACK	AV-5A-66H	B8501	024NC51212	CORE,BEADS	ACMS160808A21_2A
J4201	060K401144	RCA JACK	AV-4B-75H	B8503	024HC52216	CORE,BEADS	HCB1608KF-221T20
J4202	060K421058	RCA JACK	AV-5A-68H	B8504	024HC52216	CORE,BEADS	HCB1608KF-221T20
J4203	060K421057	RCA JACK	AV-5A-67H	CD301	06CP145007	CORD CONNECTOR	CP145007
J4204	060K481001	RCA JACK	AV3-6B-15H	△CD501	120A119909	CORD SET AC	M027001BK
J4205	060K431043	RCA JACK	AV3-6D-14H	CP001	069E7M0630	CONNECTOR PCB SIDE	00_6216_022_000_808+
J4206	060K411059	RCA JACK	AV2-6B-08Z	CP301	06GG140019	CONNECTOR PCB SIDE	A2502WR-4A
J4302	060K131027	HEADPHONE JACK	CKX-035-349ABZ1	CD2806	12B545111	CORD JUMPER	B545111
J5801	06K6910002	CONNECTOR PCB SIDE	FG-01-1	CD3002	122H0M3001	CORD JUMPER	2H0M3001
<b>SWITCHES</b>				CD3003	06CH264204	CORD CONNECTOR	CH264204
SW2201	0504101T34	SWITCH,TACT	EVQ21505R	CD4201	12C44O3701	CORD JUMPER	C44O3701
SW2202	0504101T34	SWITCH,TACT	EVQ21505R				

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
MISCELLANEOUS			
CD6204	06CP231506	CORD CONNECTOR	CP231506
CD6207	06CH254602	CORD CONNECTOR	CH254602
CP2201	06GG250019	CONNECTOR PCB SIDE	A2001WR-5A
CP2202	06GG230019	CONNECTOR PCB SIDE	A2001WR-3A
CP2301	06GGVMT030	CONNECTOR PCB SIDE	FPC1.0D-WTX-22P
CP2302	069EV5T011	CONNECTOR PCB SIDE	04_6232_105_102_800+
CP2303	069EV4T011	CONNECTOR PCB SIDE	04_6232_104_102_800+
CP2801	06GG270029	CONNECTOR PCB SIDE	A2001WV-7A
CP2802	06GG2B0029	CONNECTOR PCB SIDE	A2001WV-11A
CP2803	06GSA1010	CONNECTOR PCB SIDE	C-001-5-4K221000
CP2806	06AEY05510	CONNECTOR PCB SIDE	04_6800_655_012_846+
CP3002	06GG260029	CONNECTOR PCB SIDE	A2001WV-6A
CP3003	069E7M0630	CONNECTOR PCB SIDE	00_6216_022_000_808+
CP3601	06GSYJ302C	CONNECTOR PCB SIDE	C-HDM-2-KK223000
CP3602	06GSYJ302C	CONNECTOR PCB SIDE	C-HDM-2-KK223000
CP4201	06G6YOT019	CONNECTOR PCB SIDE	05010HR-24B
CP4203	06G7S21501	CONNECTOR PCB SIDE	WD-00021-R
CP6201	06GG250029	CONNECTOR PCB SIDE	A2001WV-5A
CP7001	06GRW20019	CONNECTOR PCB SIDE	20015WR-07LD01
CP7002	06GRW20019	CONNECTOR PCB SIDE	20015WR-07LD01
CP7003	06GRW20019	CONNECTOR PCB SIDE	20015WR-07LD01
CP7004	06GRW20019	CONNECTOR PCB SIDE	20015WR-07LD01
CP8501	06G6YOT019	CONNECTOR PCB SIDE	05010HR-24B
CP8502	06GG260019	CONNECTOR PCB SIDE	A2001WR-6A
EL2401	124116281A	EYE LET	EYE LET XRY16X28BD
EL2402	124120301A	EYE LET	EYE LET XRY20X30BD
△F3801	0805A06303	FUSE	SG501306.3P-R(GF-009)
△F3807	0835A07005	MICRO FUSE	20N_7000FSW
NR2800	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR2801	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR2802	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR2803	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR2804	110P4220M5	R,NETWORK	4D02WGJ0220TCE
NR2805	110P4220M5	R,NETWORK	4D02WGJ0220TCE
NR2809	11074223M7	R,NETWORK	CRA108223JV
NR2810	11074223M7	R,NETWORK	CRA108223JV
NR2811	11074223M7	R,NETWORK	CRA108223JV
NR2813	11074223M7	R,NETWORK	CRA108223JV
NR2814	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR4002	11074330M7	R,NETWORK	CRA108330JV
OS7601	077Q038009	REMOTE RECEIVER	KSM-2003TCW2P
△SP301	070Y056012	SPEAKER	S0412F20
△SP302	070Y056012	SPEAKER	S0412F20
SH3001	126D000044	TERMINAL PIN	YQ-36
SH3002	126D000044	TERMINAL PIN	YQ-36
SH3003	126D000044	TERMINAL PIN	YQ-36
SH3004	126D000044	TERMINAL PIN	YQ-36
SH3005	126D000044	TERMINAL PIN	YQ-36
SH3006	126D000044	TERMINAL PIN	YQ-36
SH3801	126D000044	TERMINAL PIN	YQ-36
SH3802	126D000044	TERMINAL PIN	YQ-36
SH3803	126D000044	TERMINAL PIN	YQ-36
SH3804	126D000044	TERMINAL PIN	YQ-36
TM101	076R0SC011	TRANSMITTER	R56-2225
△TH3801	DSVEHE4R7M	THERMISTOR	B57237S0479M000
△V2801	A57R01H360	LCD MODULE ASS'Y	AF080A076G OR1
X2801	100JT02513	CRYSTAL	KAC-2010
X4001	100GT02727	CRYSTAL	SMD-49 C27000J029
X5801	100DT02425	CRYSTAL	DSX321G

## RESISTOR

RC..... CARBON RESISTOR

## CAPACITORS

CC..... CERAMIC CAPACITOR  
 CE..... ALUMI ELECTROLYTIC CAPACITOR  
 CP..... POLYESTER CAPACITOR  
 CPP..... POLYPROPYLENE CAPACITOR  
 CPL..... PLASTIC CAPACITOR  
 CMP..... METAL POLYESTER CAPACITOR  
 CMPL..... METAL PLASTIC CAPACITOR  
 CMPP..... METAL POLYPROPYLENE CAPACITOR

SPEC.NO.	M57R-01H
O/R NO.	K195099